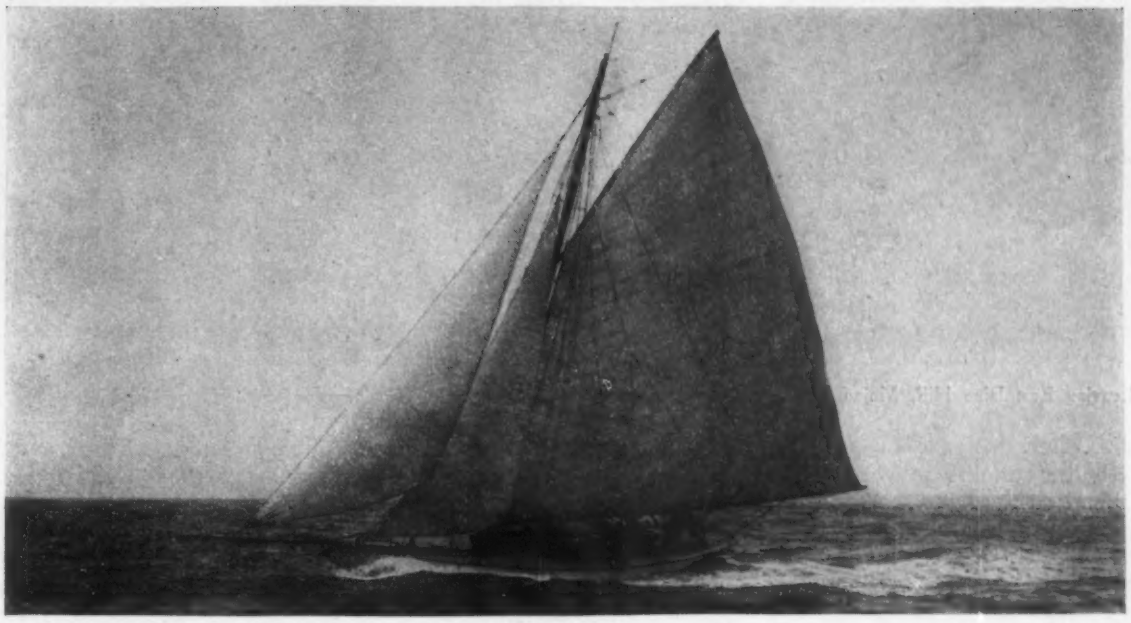
YACHTING

VOLUME XXXI
NUMBER III

MARCH, 1922

35 Cents a Copy
$4.00 a Year



Zingara was a Buzzard's Bay 30-footer, and though built in 1902 she made her debut as an ocean-going vessel in 1920.

To Nova Scotia and Back in a Thirty-Footer

The Composite Composition of Her Incomparable Complement

ZINGARA was a debutante as an ocean going vessel in 1920, having been built in 1902, a Herreshoff Buzzard's Bay thirty-footer, forty-six and a half feet long over all. Since 1919 her home port has been Port Washington. As a mere matter of principle, *Zingara* never promises any particular schedule for her cruises; she makes no positive commitments but always exceeds expectations. A cruise should not be planned, it should be hoped; Nova Scotia was our 1920 hope.

It was after dark on Friday, July 2nd, when the extra equipment was put aboard and only the eight pound lead lost its way to the ship. Saturday morning we filled the water tank and two five-gallon bottles—about fifty gallons all told, plenty (of water) for two weeks for five men—put the "lee boards" on the bunks so that we could sleep to windward, set up the seagoing stove on pivots so as to cook at any angle, took the supplies aboard, and put things to rights.

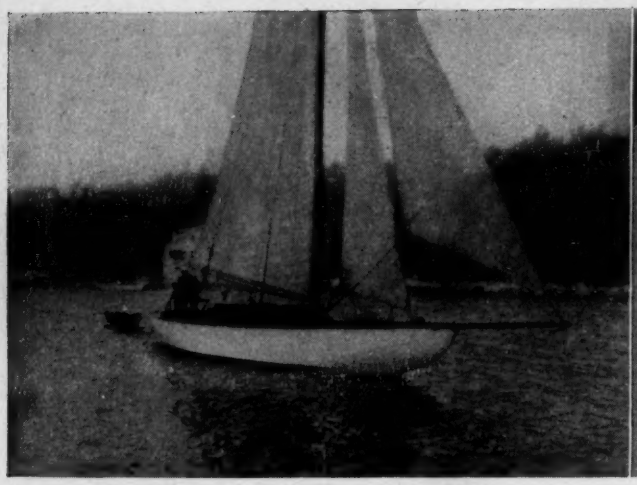
The extra equipment included a hundred fathoms of sounding wire on a reel with an indicator, a sextant, a watch whose rate had been observed for several days, a Bowditch, a nautical almanac, a spare half coil of new manila of the size of the running rigging, an extra spare (new and heavy) anchor cable, a taffrail log, a barometer and thermometer which we never found useful, and more charts than we thought we would ever use but which we found too few before we were long away.

All we did Saturday afternoon was to run from Port Washington over to Larchmont where we waited for the fifth officer, a colonel. He came aboard about 10 P. M. in a flat calm. With the barest breath of air, we declared independence from land at midnight. The lightning and booming to the northward suggested the possibility of wind, but it was daylight before the *Zingara* began to pick up speed with a west-sou'west breeze. By afternoon there were times when the spinnaker became over jubilant. At early twilight Sunday evening we were half way from Point Judith to the Vineyard light vessel, and took in the mainsail to reef it for a gust from the northwest. In the process the lazy-jacks parted, dropping the colonel into the briny. He had been leaning on the boom. Cotton rope is not reliable. Some comment occurred on the leisurely way in which his body was hauled back on deck. He took part in the comment. The comment part of him was dry.

The boom was wrestled into its crotch and we ran into Vineyard Haven under jib and staysail much more handily than if we had been a yawl under jib and jigger; because, had *Zing* carried the lethargic yawl rig, the wind would have been a whole gale, which it wasn't. Yawls are such weather breeders! Did you ever converse with a proud "yawler" when he neglected to mention hurricanes? We are not unanimous on this paragraph; our seasick member (infra) likes yawls. As the colonel went below at midnight he said to the watch, "if you feel like leaning on anything, call somebody."

The sun rose soon after the anchor sank. After breakfast work began on rigging some substantial quarter lifts while two of the crew went ashore to telegraph home and to increase our supply of shackles, fish lines and ice. We had found that in running before the wind the tender jerked hard on its painter so we stowed it upside down on the forward deck. Launching it from there was a twisting toss and a spanking splash.

At 4:40 P. M. we were away again from the Vineyard. This was Monday, July 5th. Off East Chop the spinnaker was hoisted.



Leaving East Blue Hill, Maine, in the early morning.

Zing's crew after the Colonel had left.

At either Hedge Fence or Cross Rip we had a running conversation with a hand on the light vessel.

"Where are you bound?"

"Yarmouth."

"Yarmouth is up there," pointing northward.

"Yarmouth, Nova Scotia."

The answer was uplifted hands.

Shortly thereafter the spinnaker fouled one of the jib snap hooks and began to tear. The place where it caught was 30 feet up the stay and just out of reach from the mast head. The man at the helm, alone on deck, sang out for help. The crew crawled up, all except the skipper who was frying the supper. Council of war. "Slack off the sheet." The sail tore 6 inches more and staid foul. "Haul in the sheet." The sail tore some more and was still foul. "Shucks! Damn!" etc.

Annoyed by the remarks on deck, the skipper lashed the frying pan and came up to investigate. With a stare of deep concern at the tearing sail and a brief glance of contempt at the crew, he shed his boots, swarmed up the wire stay, cleared away the sail, slid down again, rubbed his hands on his breeches and declined four simultaneous offers of a job in the circus. We took turns mending the torn sail and it was not ready for use again till the next morning.

Stone Horse Light Vessel puzzled us. Our chart showed a fixed white light. Again a conversation with the watch on the light vessel: "How long has your light been flashing?" to which the answer came, a drawl of utter disgust at ignorance, "Two months."

The watch changed near Pollock Rip Slue Light Vessel at midnight. Theoretically we had three shifts, four on, four off and four on call. Practically, the crew, even though we were all officers, had not yet learned to sleep in daylight, so those of the middle watch, 12-4 A. M., left the deck to darkness and to a single hand. It's the best watch of all—solitude and expanse with the scend and slide of the sea.

The wind that night was W.N.W. and the course N.E. by E. As a precaution a double reef had been tucked in before dark; nobody waked when it was shaken out at dawn.

Once the spinnaker was up again later in the morning, it stayed up for over twenty-four hours. That second night in the open with the spinnaker drawing well was the very best of all. Of course the helmsman couldn't see the pennant and we had had doubts whether the compass alone would prove a sure means of preventing jibes; moreover the binnacle light was temperamental. But there was no trouble in practice, the feel of the wind on the helmsman's cheek was accurate enough, and for long spells a star dead astern was a perfect course protractor. Later, we found sailing to windward in the dark much more troublesome.

The Gulf of Maine does not need traffic cops yet. Only two vessels were sighted in our forty-hour run across. Why does the crowd prefer Fifth Avenue? The weather, though, was cool enough so that at night the watch wrapped himself as for a sleigh ride.

If you wish to keep informed of what is going on above when you are below while under way, choose a bunk in the forecastle. The mast and the stays telegraph all news to that part of the ship. The trouble is that the messages are not only amplified tenfold below deck, but are also in code. The rubbing of the snap hooks on the headstay is reported in terms of a chain cable passing through the chocks; the chafing of the gaff jaws on the mast sounds as though the tender were being shunted across the deck. Until you have deciphered these messages you cannot get over the edge of the purple down, but must "go back with Policeman Day, back from the City of Sleep."

The Bellman's navigating methods in the Hunting of the Snark are not so fantastic after all. You will remember that "he had bought a large map representing the sea, without the least vestige of land." Our course was plotted on such a map (supplied by the government) as we went along. The plan was to make for a point fifty miles due west of Yarmouth and then run at the coast on a parallel of latitude. We chose a north and south coast line for our first landfall because we felt surer that we could determine latitude by observation than longitude. Outlying ledges and fog seemed simple if approached latitudinally. Besides there was Lurcher Shoal light vessel—what more could we want?

Our Wednesday noon "fix" by sextant chronometer and mathematics put us just twenty miles north of the Yarmouth latitude, where we should have been by dead reckoning. According to this we had overshot and our log had under registered about one mile in ten, which might be accounted for by the following sea.

But the tide was setting us south that afternoon at the rate of 3½ knots per hour and might compensate for the error.

Not having that confidence in the navigator which we afterwards developed, we were no bolder than to assume we were *somewhere* between the dead reckoning and the observed position. We headed east, anyhow, with the wind shifting into the south east. Land by four

Entering Digby Gut, through which the tide pours at a five-knot rate.

The navigator at the stick.

o'clock was the computation, which proved right. The fog came at three-thirty with variable density. It would have been a pious but probably a useless plan to have tried to run a chain of soundings. We learned later that a distant bottom is hard enough to locate accurately in a calm with a mere sinker. (Note for next trip—sounding tubes.)

"Land ho," came within less than a mile of shore. It was a point with a light house and a high coast running northward. A little lift of the fog seemed to show a break in the shore line three miles or so to the northeast.

Congratulations to the navigator were in order. We consulted the chart and called it Brier Island. The buoy off the point to the southwest was faintly discernible through the mist, and so was the one on the reef outside and north of us. We all distinguished them, though doubtfully.

Zing came about on the port tack and stood off shore while we tied in a double reef. Carrying full sail close hauled, she hit the steep seas too hard with her pre-1905 bow. Sharp forward sections would make her the perfect ship.

The tender was still on deck forward. It was launched promptly when the seas began piling over the bow and washing the small boat against the cabin house. The then existing forward hatch cover was not the *chef d'oeuvre* of either a proficient professional or an adroitly adept amateur. It leaked. Shortly after the forward deck began to be inundated by the high, steep seas the cabin carpet was afloat and water was swashing between the planking and the ceiling in the lu'ard bilge and gulching out at the vents a few inches above the bunks.

What to do? We were sleepy. Yarmouth entrance in fog, after dark, over twenty miles to windward with outlying ledges was an alternative we did not take. Nor was there any enthusiasm for standing off for the night.

When is venturesomeness caution? We were willing to risk the assumption that this was Brier Island, and our rather small scale charts indicated no obstructions close to Brier Island inside the ledges. The decision was quickly made to run off, hugging the shore close enough so that the fog would not cut off our view of land, and to anchor in Grand Passage, to leeward of the island.

When we were abeam of where the ledge should have been the buoy disappeared. The wish is sometimes father to sight as well as to the thought. Grand Passage refused to open up. The colonel was studying the chart. Perhaps he was the first to remember that 3½ knot current. "Look here, that light was Cape St. Mary!" Now, we had neglected to read the log when we lifted sheets, so we could not check up by the distance run from the light to the first little settlement, Meteghan (note for next trip:—a picture book of lighthouses), but the new hypothesis seemed to fit the shore line and was soon proved correct.

Off Cape Cod we laid to and caught some cod.

With the south east wind the wooden breakwater at Meteghan offered plenty of shelter, but our anchor did not take hold on the pebbly hardpan. Tying one end of a spare line to the crown of the anchor and the other end to a life preserver had been a useless precaution. Two of us rowed ashore for local advice as to holding ground. They were soon aboard again with Captain Sullivan, a man of fifty years and experienced in long sailing voyages, now engaged semi-weekly in chugging the mail across Saint Mary Bay. He ordered us to make sail. *Zing* lunged off on the starboard tack for a hundred yards, then the Captain threw the tiller hard down. It was his first experience with a short keel, but his recovery from his surprise was as sudden as his expletive was picturesque. At the next spin he said, "Wish I owned her."

A line to a mooring, plus both anchors in mud, made *Zing* secure. All hands went ashore for food and to telegraph. It was the Yarmouth Western Union that answered the phone. On hearing the signature to our message the operator announced a message for us just received from home! "All well." Who believes Romance is dead?

Next morning we inspected a sturdy boat building at Jules Robichau's yard, and were off at ten o'clock. Digby via Petite Passage was the project. The wind was strong south east, the fog thick. The small scale chart didn't say what to do next if we missed the entrance to Petite Passage and when we made land we shoudn't know whether it was Long Island or Digby Neck. This gave us an excuse to take on Captain Sullivan again. But the piloting was really very simple. Once we were clear of the shore the wind moderated enough so that we could add the peak of the mainsail to the staysail we started with, and later we carried all of the double reefed mainsail, and the jib.

The sound of the breakers on Long Island preceded sight of the land; in fact we never did see the top of the cliffs. Three or four boat lengths from the shore, as soon as we could see the rocks, we changed our course to parallel the coast line. The pilot guaranteed there was no bottom and no protruding ledge. After a mile or two the current became swift; it runs seven knots an hour in the passage. We passed some fishermen in launches, but still saw only one shore. The fog continued thick till we were well through Petite Passage and out in the open Bay of Fundy. Then came bright sunshine, and our bedding decorated decks, stays, reef points and mast hoops.

As sun worshipers we put our last New York beefsteak on the fire and prepared lunch in elaborate style. Politely appreciative comment was looked for from our pilot. His words were, "Anything goes when I'm to sea." And yet Judge Hough says seamen are not truthful.

It was late afternoon when we anchored at Digby. A swim; then a gaze at the natural charm of Annapolis Basin stretching away to the north, followed by dinner and a bowling contest ashore; a climb in the dark down a ladder, twenty-seven feet of which was slimy; sleep—and the anchor on deck at dawn.

This was Friday morning, July 9th, and the tide was with us at the start of our 500 mile beat homeward. When you have said the wind was southwest, you have described it with a very fair degree of accuracy for the entire homeward voyage. Even the calms had a southwest slant and the bumps there was no doubt about.

Friends and relatives in Frenchman's and Blue Hill Bays, on the Maine coast, threw us delightfully behind schedule and robbed us of the colonel. In return we shanghaied a good sailor at Castine for one night only, but that one the best of black-night sailing among the islands from Castine to Rockland, beating down the East side of Islesboro where there are ledges but no lights. There we learned how surely you can pick your way by watching the log and keeping accurate track of courses and distances on the chart.

Another transient came aboard at Tenant's Harbor. He had been a sailor from his cat boat days; but machine guns must have disturbed the little organs in his ears which used to keep his insides level, despite bounding billows. At any rate he was soon seasick and lost everything but his humor. We were debating whether to push on straight for Cape Cod or to put in for the night; it was foggy, thundering, raining and *Zing* carried a double reef. The ill one's contribution to the debate was, "Do as you think best, but if you stay out here you will have the novel experience of a burial at sea." That settled it. Sheets were eased, and after groping through the murk a mile farther than our calculated position warranted we picked up Burnt Island again, ran in to George's Harbor and were soon moored and boiling lobsters.

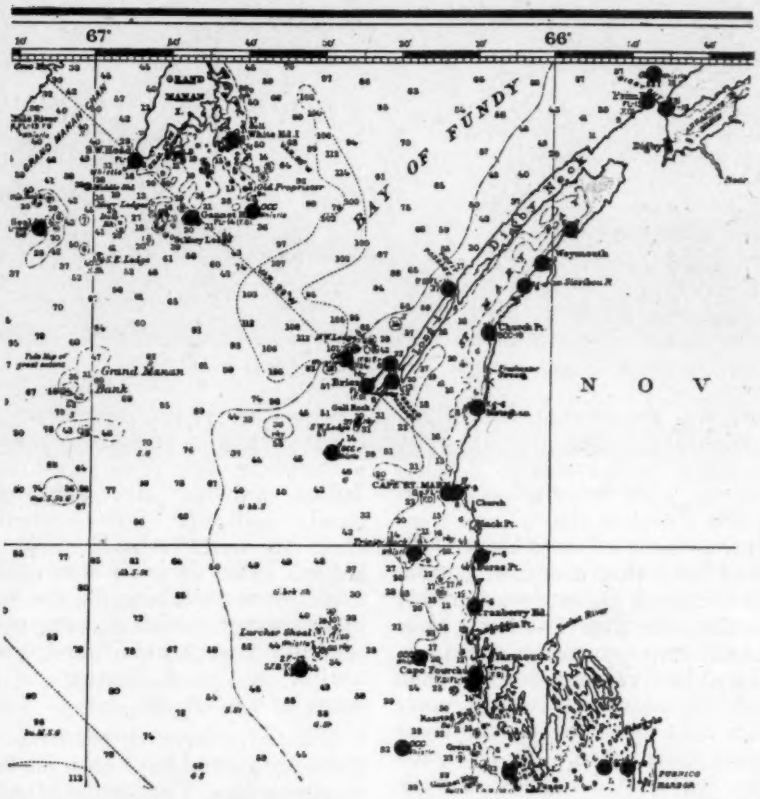


Chart of the entrance of the Bay of Fundy, showing where *Zingara* made her landfall.

It was again Friday, and a quiet morning, as we left the lobstermen's huts slowly astern. We did not put in port again till Sunday night in Vineyard Haven. Friday night we did one foolish thing. Just after dark we were off Cape Elizabeth. We knew there were messages for us in Portland. One man rowed ashore alone to the life saving station to telephone while *Zing* tacked back and forth a mile off shore, keeping the two lights in line. The night was pitch dark and quite a surf was breaking on the rough coast. The oarsman returned within the time allowance and we ceased to repent for having let him go.

The wind was very light that night and Saturday. During Saturday night we made our landfall on Cape Cod, perfectly. Sunday morning found us drifting off the Nauset lights on the outside of the Cape where, with the generous help of some real fishermen who supplied the bait, we caught a fine mess of codfish.

Sunday evening, in Nantucket Sound, the wind began to climb the Beaufort Scale. Just before dark we tucked in a double reef, and shortly the mainsail was lowered altogether. Temporarily it blew from a point or two east of south; then a wave licked over the weather rail into the cockpit, as if it had lost its way in the dark. We were due in New York Monday but we anchored in Vineyard Haven, and thereby spoiled our chance to make the round trip in two weeks.

The next morning the wind was equally strong but southwest again. Consider the strain on a modern boat going to windward! In *Zing's* case there was a forty-foot lever twisting her to leeward in one part of her structure; five tons of torsion to windward in another part; and added to these the jerk caused when her blunt bow bumped each buffeting billow. No wonder many boats squeeze their putty and wrinkle their canvas decks! The queer thing is the fatigue and reinvigoration of material. Steady

(*Continued on page* 182)

Buying a Boat

A. H. WALBRIDGE

SEVERAL years ago the former German Kaiser ordered a seagoing schooner yacht from one of America's foremost designers of this type of craft. He got what he ordered, and immediately undertook a series of mug-hunting exploits with rather indifferent success, which only served to show that he was not so very different from a great many other mortals in the matter of fallibility. But the All Highest had a little stunt in his bag of tricks to which no one else is known to lay claim. It is reported that on occasion, when his good, weatherly yacht was being worsted by some purely racing creation, he would hoist a signal changing the course to be sailed, so that he would come romping home well in the lead. Of course, he more or less had to be the winner, and objections were not considered good form in most instances, so he had very little trouble in getting away with the plunder. It is safe to say that his position in this respect was quite unique, so that it behooves those of us who would race to give speed the prime consideration. Conversely, from poignantly remembered experience, the writer would caution the prospective cruiser against expecting comfort in a racing machine.

The foregoing is calculated to emphasize to the man who would purchase a boat, the very urgent necessity of first carefully analyzing his requirements and the conditions under which he will normally make use of his purchase. To the true yachtsman, his craft is a source of pride no less than a means of recreation, and nothing can be more disheartening than the continued necessity of apologizing to his guests for inadequacy of conveniences, lack of ordinary comfort or cumbersome equipment. Most of us have a family to consider, be it large or small, and as a general rule that same family will be called upon to provide the total personnel for handling the boat. So don't fail to consider carefully friend wife's ability as an A B, for you are apt to inflict considerable damage on your innocent neighbor at the anchorage when making your first mooring, should she be in any doubt as to what is required when you tell her to "Let go the jib halyard." Your position on the bowsprit in a crowded anchorage at such a time will be anything but enviable. Nor is it desirable to count on restricting a young and active heir to the confines of the lazarette in order to make room on deck for the guests of the day's outing.

By far the greater number of us are obliged to restrict our boating to week-ends and holidays, with perhaps a week or two of vacation, during which we are at liberty to cruise as extensively as time and weather permit. Often we will have more or less competent guests along, usually for not more than the day. In consequence, it is well to think first of space on deck, for a boat that is nine-tenths cabin, though perhaps a comfortable cruiser, is often a serious misfit for ordinary usage. Reasonable deck or cockpit space can nearly always be obtained without sacrificing the sea-going or cruising qualities of any properly designed boat, and a suitably proportioned balance enhances the appearance as well. Another thing, in a power boat, unless speed is the first essential, don't forget that a certain economical speed exists for every hull, beyond which it cannot be driven without an undue expenditure of power. Power means fuel consumption, and gasolene is not to be obtained with cigar store coupons. From eight to twelve knots continuous speed for the average family cruiser will reel off a good many long sea miles in a day's time, and after all, what we most desire is a maximum of time on the water at the lowest cost consistent with our other requirements.

Having pretty well determined the uses to which the boat will be put, the next consideration is the sum available. You will not run true to form as a yachtsman unless you wind up by paying more than you originally intended, probably as a result of having found some craft that appeals to you from keel to truck. But that is up to you; the present literary effusion being more concerned with your getting the worth of your hard-earned cash by pointing out a few of the pitfalls awaiting the unwary in making his choice.

Let us assume, then, that two or three boats have been located of a suitable type and at a price that looks about right. Age and depreciation are next to be given consideration. A well built boat of wholesome model is good for upwards of twenty years of useful life, depending largely upon the materials and fastenings used in the first instance, and secondly, upon the care exercised in maintenance and upkeep. The former is easily ascertainable, but a knowledge of the latter can, in most cases, only be got through certain more or less definite indications, which only experience can teach us to read aright. Oak is almost universally used as the frame, excepting stringers and clamps, which are frequently of yellow pine. For planking and decking pine, cedar, cypress and mahogany are common practice, and occasionally oak will be found. Do not think that oak planking in itself is a recommendation, for it requires more care, if anything, than other materials, and under certain conditions will deteriorate just as rapidly. Copper fastenings are the most expensive and will not corrode, but good galvanized boat nails will endure throughout the life of the boat. Lead ballast, too, is an item of worth intrinsically, although it is not necessarily any more effective than iron.

Having specified briefly what to look for in the way of materials, let us now turn to those items indicative of the care and intelligence used in maintaining and operating the boat. No owner would allow a prospective purchaser to tear out sheathing or rip up canvas decking to examine into what lies behind or underneath, so we shall be obliged to base our judgment largely on external appearances. The best conditions under which we can hope to make our inspection are where the boat has been hauled out for winter storage, as not only can the under portions of the hull be got at, but also a comprehensive idea of the form and design may be acquired. The latter is, of course, of first importance in the purchase of a boat for racing, whether sail or power, and is furthermore, a subject of too great a scope to come within the limits of this discussion. Unless the purchaser has had sufficient practical experience to enable him to form his own opinion as to the form of a racing hull, he had best enlist the services of a compe-

tent naval architect to advise him. If possible, it is well to ascertain the name of the designer, as the value of a reputable design is unquestionable, not only when it comes to the re-sale value of the boat, but as an assurance of safe and reasonably satisfactory performance in operation. Suitable provision for stability and adequate strength in the members of the hull to withstand the stresses to which each is subjected, are practically foregone conclusions, provided the designer be a man of repute.

In an examination of the hull of a boat, there are a number of points which we cannot afford to overlook, and in spite of our best efforts, we may very easily be fooled. Generally speaking, when repairs to the hull, either in planking or frame, are evidently necessary, the ultimate extent of such repairs is most difficult if not impossible of prediction. Let us consider several of the readily available means of obtaining an idea as to the condition of the hull.

Care Used in Laying Up

It is a safe bet that the man who leaves his boat in a slovenly condition at the end of a season's use, has not given her proper or intelligent care while in commission. On the other hand, a boat hauled out and suitably protected from the elements during the winter months, even though the idea at the time was to sell before spring, will doubtless have been kept shipshape and clean while in use, and will probably not have been strained or misused. The winter covering may be of almost any description, so that it be reasonably weather proof, but suitable provision for ventilation is most necessary. Solid keel blocking, preferably employing wedges, and shores, placed on ample footings, against the bilges and not the sheer or rubbing strakes, are a necessary provision against straining the hull when the spring warmth takes the frost out of the ground.

Fresh Paint

One of the oldest tricks in the trade consists in spreading on a good coat of paint to cover up a multitude of sins. A careful owner will clean off his boat when laying her up, and some will very properly apply a coat of paint to protect her from the weather during the winter. But a little judicious prodding and scraping with a knife, particularly if the painted area be relatively small in extent, will often uncover the reason therefore.

Evidence of Strain

If the boat has been subjected to undue strain by wind or weather, it will be apparent in the loosening of her timbers, planking or fastenings. Spreading of the seams, the loss of putty or caulking, or for the reverse strain, the extrusion of putty and caulking and the pinching together of the seam will indicate such strains. They are to be sought along the rabbet, the seams of the garboard, sheer strake and bilge strakes, in way of the standing rigging and at the bob-stay shackle on the stem. Also, the fastenings of the floor timbers, bilge stringers, mast partners and knees may have become loosened so that the timbers work.

Dampness and Dry Rot

Decay of the wood from these causes usually occurs in places where ventilation is poor and the wood is subjected alternately to moisture and the heat of the sun. It may be detected by prodding with a knife blade, and is evidenced by a punky condition of the wood. Take a flash light, and crawl up in the after overhang, examining the planking, frames, knees, horn timber and transom. The rudder post trunk and the space between the cockpit staving and the hull, under the deck, are likely spots.

Corrosion of Fastenings and Fittings

Examine all the outboard connections, drains, scuppers and exhaust pipe. If a bronze propeller is fitted, the metal work of the rudder and skeg, particularly the lag screws, are subject to electrolytic action, and may be eaten away. Look at the turn buckles, which should have been coated with dope when laying up, and note whether they are corroded or the threads stripped. Deck hardware, such as cleats and chocks, should be examined to see whether their fastenings are secure and intact. The ice box lining and drains and other plumbing should be gone over, as well as the electric wiring and connections, and the keel and dead wood bolts should come in for inspection.

Canvas Decks

As previously stated, it is not feasible to tear up canvas decking, but the condition of the canvas may usually be ascertained from surface appearances, worn spots and lack of paint. Also, it is usually possible to gain some idea of the condition of the deck beneath by an examination of same from below, looking for stains and soft spots indicating leaks.

Leakage

Knowledge as to leakage can only be gained while the boat is out of water from the appearance of the inside of the hull, unless, of course, the seams are gaping to an extent sufficient to let daylight through them. Have a look at the inside of lockers, under the transoms and in out of the way corners for evidences of a "high water mark." The condition of the limber holes and the wear on the bilge pump buckets may also throw some light on the subject.

Ballast

Inspect the outside ballast on the keel for dents and scratches, which would indicate forcible grounding of the boat. See that the ballast bolts through the keel are secure, and that the washers are not cracked. Inside ballast should have been removed, if possible, before hauling out. Where concrete ballast is found, carefully examine the planking beneath it from the outside.

Spars

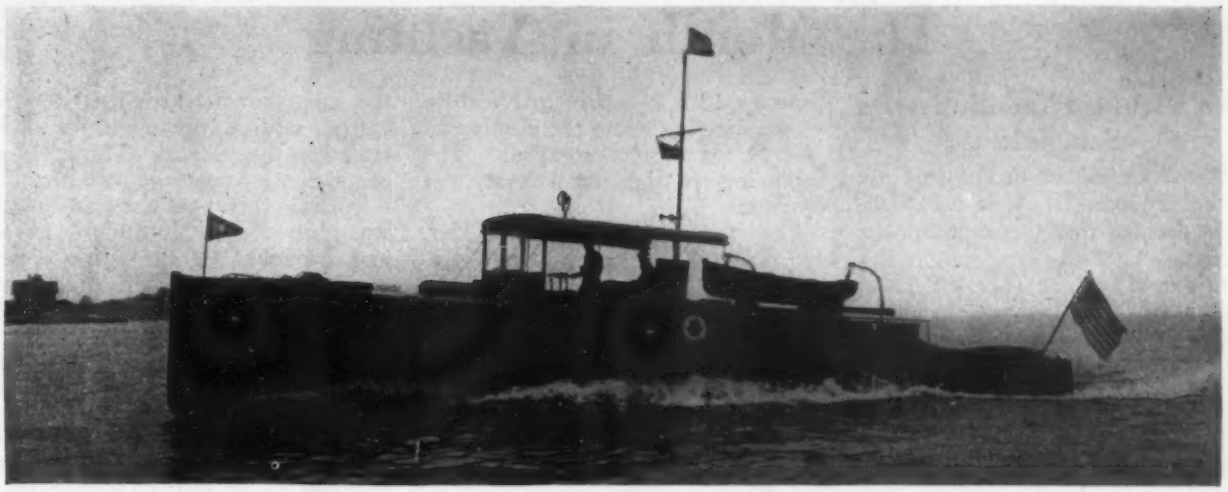
All the spars should be carefully inspected, and any unduly large checks or windshakes, particularly if puttied up, should be probed and traced out. Small cracks are not necessarily indicative of weakness. The glued joints of hollow spars need examination, particularly in Marconi masts or any curved spars. Beware of fished or spliced sticks. They may last indefinitely, but are always a source of weakness. Spars show evidences of strains or springing at points where they are held fast by stays or otherwise. At these points, also, dry rot is to be looked for. Therefore lift off all rigging eyes, if possible, and examine with a knife underneath and also all metal bands, pads and eyebolts. Do not forget the hounds, partners and heel of the mast, nor the gaff jaws and goose necks.

Canvas

All sails and awnings should have been dried, bagged and carefully stored away in a dry place for the winter. Shake them all out, and have a look for mildew and the condition of the roping, thimbles and battens. Threadbare canvas will let go at any time, and will have to be replaced.

Cordage

This item of the boat's equipment should have been unrove, coiled down and tagged for storage in a dry place. Open the strands of both wire and manila at several points along their length. If the



Jada is a fine example of a 56-foot cruiser, whose speed was increased five miles an hour by the installation of 150 additional H.P. She will now make 24 miles an hour. Owner, Charles L. Harding of Boston.

strands show bright the rope is still fit for use. The ends should be whipped, and although it is not practicable to remove parcelling, it is usually possible to obtain some idea of conditions from the outside appearance. Blocks and turnbuckles should have been oiled and tagged when laying up. Examine the blocks for wear in the bushings, broken sheaves and cracked cheeks.

Other Equipment

Of the remaining equipment, the ground tackle and the steering gear are most important, and can usually be inspected fairly readily, provided one takes the time. It is usually well worth while. Lamps, running lights, fire extinguishers, bell, whistle, life preservers, pilot rules, etc., while not of sufficient importance to warrant rejection or acceptance of the boat, will all have to be acquired, and are therefore worth looking over.

Power Plant

No attempt will be made here to discuss the relative merits of the many different types of marine engines, by far the large majority of which are reliable and consistent performers, if given even half a chance. In general, however, it is not reasonable to expect good results from a light, high speed engine when installed in a heavy, relatively slow boat. Again, it is rarely pos-

(*Continued on page* 181)

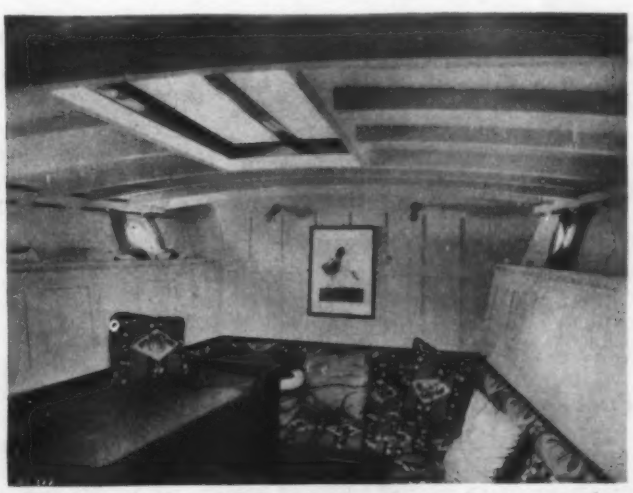
Increasing Speed of *Jada*—an Express Cruiser

As an example of the possibilities of increasing speed in power cruisers through the installation of better suited and higher powered engines, the changes made in the *Jada,* a Boston boat, are interesting. Built by Lawley in 1920 for Charles L. Harding of Boston, and powered with a pair of Model F 6-cylinder Sterlings, the *Jada* was one of the neatest outfits in those waters. But, repowered last season with a pair of the Dual Valve 6-cylinder engines of the same make, which were placed exactly on the original engine bed, and yet delivered a total of 150 additional horsepower, the boat's speed went up 5 miles an hour, and she is now able to maintain 23 to 24 miles without exceeding 1,500 revolutions. And her owner says: "That's fast enough for me."

This boat is 56 feet long, 11 feet 3 inches in beam and 2 feet 9 inches draught. Her two engines turn 22" x 24" wheels about 1,500 revolutions, maximum. They have never been permitted to exceed these revolutions, although it is known that the engines can turn these same wheels up faster. With 5¾" bore, these two engines aggregate 450 H.P., and this additional horsepower is delivered at the same number of revolutions. This is accomplished by increased efficiency in the combustion chamber.

The *Jada* has full deck control and a special switch on the motors enables them to be started from the large bridge deck amidships beneath which the engines are installed. Her accommodations consist of a commodious forward cabin and a slightly larger after cabin, followed by a sunken cockpit. She is a round bilge boat and not a V-bottom type.

Bridge deck control with everything handy to the helmsman, from revolution indicator to chart table.



The forward cabin of *Jada* makes a very attractive stateroom for the owner.

The Month in Yachting

Lake Michigan Yachting Ass'n Schedule

At the December meeting of the Lake Michigan Y. A. it was definitely decided that the annual Lake Michigan Yachting Association Regatta would be held July 4th, 1922, off Belmont Harbor, under the auspices of the Chicago Yacht Club. There will also be the long distance race in the latter part of July to either Mackinac Island, or possibly to Harbor Springs. It is probable that an open regatta will be held at Charlevoix (on Pine Lake) and will be definitely arranged by the time the schedule is finally announced. The Lipton Cup Races in August, and the Atlantic-Pacific-Great Lakes "R" Race off Belmont Harbor Labor Day are fixtures.

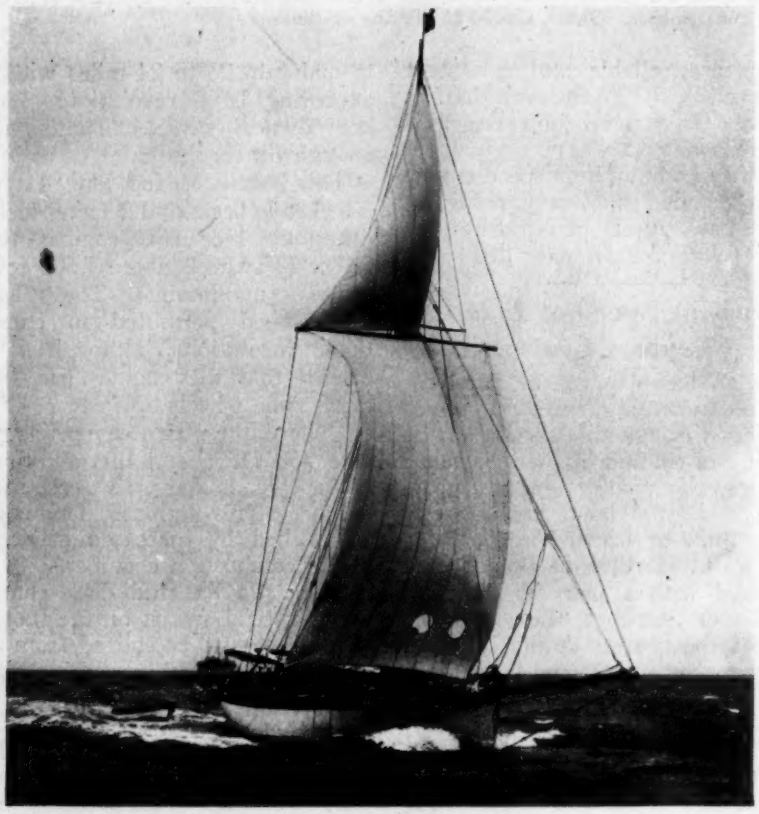
Commodore Sheldon Clark of the Chicago Yacht Club hopes to begin digging for the new club house about Decoration Day and it is now expected the new building will be ready about next New Year's Day.

Port Washington Yacht Club Officers

The Port Washington Yacht Club, of Port Washington, Long Island, held its annual meeting on January 15th, the principal feature of the meeting being the election of officers for the coming year. The following is the ticket that was elected:

Commodore, George W. Elder, Jr.; Vice Commodore, Adrian Iselin, 2nd; Rear Commodore, G. L. Gilmore; Treasurer, Frederick H. Walsh; Secretary, Leo H. Duer.

Vice Commodore Adrian Iselin, 2nd, who is building a 6-meter yacht, will sail this boat under the Port Washington Yacht Club burgee in the Long Island Sound regattas.



A novel, yet useful sail for a sloop. The *Dolly Varden*, owned by Thomas Ratsey of Cowes, with squaresail and raffee. The holes in foot of sail are to see through.

A Novel Cruising Rig

Something new to yachtsmen on this side of the water in the way of sails for a sloop are shown in the accompanying picture of the famous old sloop *Dolly Varden*, owned by Mr. Thomas W. Ratsey, of Cowes, England, built in 1872 and as good today as when built. The photograph was sent us by George E. Ratsey, of City Island, who says concerning it:

"This shows the effectiveness of a squaresail and raffee, with the wind free. It is one of the finest sails for any cruising boat, being simply hoisted on the staysail halyards with a little wire rope (or jackstay) up and down the mast and the spinnaker halyards used for the raffee, with a downhaul as illustrated in the picture. The holes in the sail are to see through.

It was this boat's trisail which was given to Mr. Nuttings *Typhoon* and brought her through so successfully after her sails had been blown away."

Detroit Yacht Club Planning Busy Season

Commodore Garfield A. Wood, winner of many national and international motor boat championships, was re-elected commodore of the Detroit Yacht Club, at the annual meeting on Jan. 9. The attendance at the meeting set a new record for the club, more than 500 out of the 2,084 members turning out.

While the D. Y. C. is famous for its power boats the directors proposals in regard to sailing activities in 1922 met with the hearty approval of the members, and the purchase for the club account of ten new cats was authorized, thus giving the club the largest fleet of club-owned cats on the Great Lakes. Next season the club will own 26 in addition to the numerous privately owned cat-boats in the fleet. The directors also announced that the club would contribute a substantial sum toward the building of a sloop to compete this year for the Commodore Richardson International Trophy, emblematic of the Great Lakes championship. This trophy was recently put up for Class R. boats by the Yacht Racing Union, the deed of gift formerly providing for Class P. competition. The R class champions of Lakes Erie, Ontario and Michigan will meet in a final series in the fall for the cup, and the D. Y. C. is seeking the championship finals for the neutral waters of Lake St. Clair, in September.

Commodore A. A. Schantz, chairman of the building committee, reported that the contracts for the new $500,000 club house on the new island off the Belle Isle shore had been let and that the new club house would be opened in the spring of 1923. The treasurer showed that the club was more prosperous than ever in its history having cash assets of $312,000.

In the election of flag officers, the rear-commodoreship was the only one to give the element of competition. George H. Voelkner was re-elected for this office. Vice-Commodore O. D. Cutting, Treasurer Commodore R. W. Rennie and Sec-

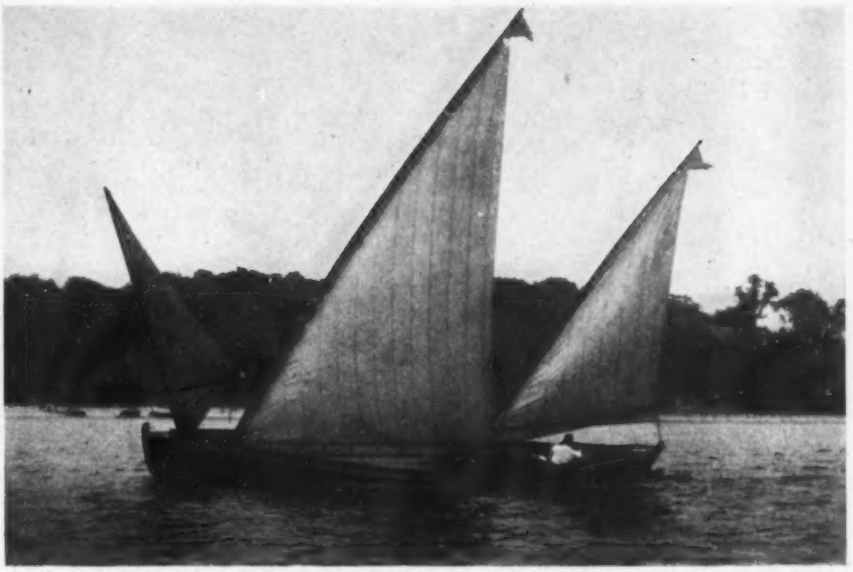
retary William J. Fuehrer, were re-elected. Dr. O. S. Ratigen was elected fleet surgeon and L. K. Wood, measurer. The successful candidates for directors were: Commodore Alex I. McLeod, Le-Roy J. Gilbert and Edmund J. Stafford.

A Strange Rig

Speaking of unusual rigs, here is one that is very seldom used at the present time, though those who sailed around Oyster Bay last season may have seen a boat with this rig knocking about, as one is owned by Colgate Hoyt, a member of the Seawanhaka Y. C. Her owner says that the head sail is usually called a "stick-out" and it was formerly quite freely used by the oystermen on Chesapeake Bay who use this same type of boat. The name is very appropriate to the position of the sail and to the way it is set.

The boat herself is a Chesapeake Bay sailing canoe and this one and another similar to her were bought by Mr. Franklin Remington and his brother some fifteen years or more ago, on the Chesapeake, and were sailed up along the coast single handed in March, which speaks well for their ability and seaworthy qualities.

In their construction the boats are very interesting, being built of three heavy timbers doweled together and dug out. In fact, the bottom of the base of the centerboard trunk is hewn out of the middle log, and the boats have smooth bilges, the frames or ribs only coming down to the top of the side logs. Mr. Hoyt says these two boats are very fast off the wind when they once get their way on, and are very handy.



Another novel rig is that of the Chesapeake Bay canoe whose headsail, usually called a "stick-out," is a spritsail. None of the masts carry stays.

Toronto Sailors Plan Busy Season

The coming summer on Lake Ontario promises to be an unusually busy one, and the members of the Regatta Committee of the Royal Canadian Yacht Club of Toronto are working on a heavy racing program.

The Royal Canadian Yacht Club doesn't confine its racing to racing boats, but they schedule a number of cruising races throughout the season which take in most of the Royal Canadian fleet, and in addition to this, they have to take care of the regular course races, of the Lake Yacht Racing Association Regatta, to be held near Pringer's Cove, which will take place from July 11th to July 15th, and will be preceded by a cruising race for the Freeman Cup from Cobourg to Pringer's Cove, a distance of 75 nautical miles. During this regatta the races for the George Cup, a class "R" trophy, will take place and in anticipation of this event it is probable that the Canadian organization will have a new class "R" entry this year.

Then there is, of course, the Richardson Trophy event for class "R", which will include boats from Lake Ontario, from the Inter-Lake Association of Lake Erie and from the Lake Michigan Yacht Racing Association. These races will be held the latter part of the season, and will bring together the champions of the different sections mentioned.

An unusually commendable feature of the program this year is a series of mid-week Club races for boats in class "P" and class "R" over the Bay course. In these races only two members of the regular crew will be allowed, the balance of the crews being taken from the boys of the sailing dinghy fleet. As the latter fleet comprises some forty-odd sail, there is plenty of material available and the hope is in this way to encourage an early graduation to the larger craft. Other clubs would do well to follow this plan.

The new Club House of the Royal Canadian Yacht Club is rapidly nearing completion, and will be ready for the opening of the season.

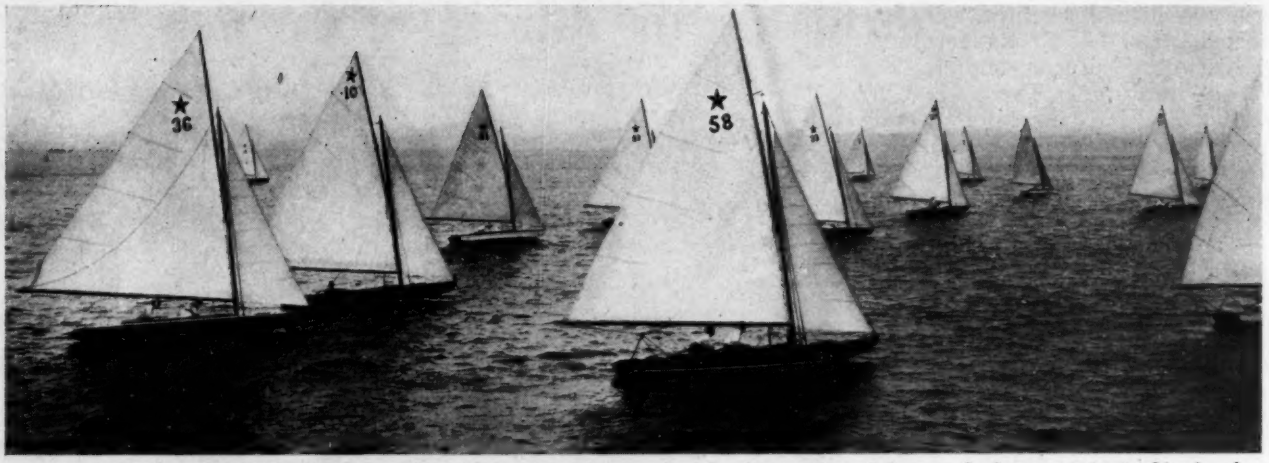
For those who want to "get there" in a hurry a high speed runabout furnishes the means. This is the *Ricochet*, a Port Washington boat owned by Horatio N. Slater, who likes to burn up Long Island Sound at 36 miles-per-hour. Her power plant is a 200 H.P. Hall-Scott Six.

Long Distance Racing to the Fore

Three assured entries and another possible entry for the Brooklyn Challenge Cup this year assure a race for this famous trophy which will be equal to any that have been sailed for it.

The entries so far are *Malabar II*, the challenger, a small schooner owned by John G. Alden, the *Azor*, the defender, of the New Rochelle Yacht Club, owned by C. A. Marsland, and the *Butterfly*, representing the American Yacht Club, which won the race in 1920, when she sailed under the colors of the Harlem Yacht Club. The possible fourth entry is a small schooner owned by John R. Fell of Philadelphia from designs by John G. Alden.

The probable course for the race will be from New Rochelle Harbor, thence through Long Island Sound



The Star Class has always furnished some of the best racing wherever there has been a fleet of them, and when one wins in this class he usually knows he has been racing. The Star Class Association has just been formed with 108 boats already registered.

to and around Vineyard Sound Light Vessel; thence southerly of Block Island, Long Island, and Coney Island to a finishing line in Gravesend Bay, about 282 nautical miles.

The general conditions of the race are as follows:

The Brooklyn Yacht Club is the donor of the perpetual Challenge Cup, to be known as the Brooklyn Yacht Club Ocean Challenge Cup, designed to encourage the building and sailing of small seaworthy yachts, to make popular the art of navigating or cruising upon deep water and to develop a love of true seamanship in the amateur sailor.

Any organized yacht club in good standing, of any country, shall have the right to challenge for this cup and sail for it, provided the challenge be made in accordance with spirit, terms and conditions of this instrument.

The Cup shall be raced for by vessels propelled by sails only. The boats must be yachts built and used for cruising and must be of a seaworthy type, substantially built, strongly rigged and properly ballasted, with closed cabins and watertight cockpits. Their rating must not exceed 31 feet.

A National Star Class Association

A movement of importance to those who sail the popular little Star Class boats on any waters was launched recently when Star Class owners from every section of this country met at the Hotel Astor on January 20th for the purpose of organizing a national association. The result of this meeting was the formation of the Star Class Yacht Racing Association.

Charters were granted for the forming of five branches, to be known as fleets, as follows:

Western Long Island Sound Fleet.
Eastern Long Island Sound and Fisher's Island Fleets.
Lake Erie Fleet.
Detroit River and Lake St. Clair Fleet.
Narragansett Bay Fleet.

There are now 108 registered Stars in the Association, about fifty are to be built in 1922 and there are many other boats of which no definite records have as yet been obtained. Committees were appointed to investigate the fleets existing on Lake Ontario, at Lynn Harbor, Mass., Jacksonville, Fla., and Panama, and if these boats are found to be in accordance with the Gardner specifications, these fleets will also be admitted to the Association.

It was definitely decided to hold a National Championship Race, beginning in 1922, for a perpetual trophy known as the Star Class National Championship Trophy. The first race will be held under the auspices of the Western Long Island Sound Fleet. Challenges were received from the other four fleets. The race probably will be held in September, immediately preceding the International Six-Meter Race.

The Star Class Association believes that this is the first organized attempt to standardize racing of small one-design boats in this country and to hold National Championships for boats from all sections, thus bringing yacht racing up to the same standard as other nationalized sports. It is certainly the largest association of one-design yachts ever formed and it should do a lot for the interest and growth of yacht racing throughout the country.

The officers of the new Association are:

President, G. A. Corry, Manhasset Bay Yacht Club.

Vice-President, Henry Watterson, Cleveland Yacht Club.

Secretary, G. W. Elder, Jr., Port Washington Yacht Club.

Treasurer, Charles Burlingham, Black Point Yacht Club.

Historian, C. F. Searing, Bayside Yacht Club.

EXECUTIVE COMMITTEE

John F. Miller, Detroit Yacht Club.

William McHugh, South Norwalk Yacht Club.

Walter C. Wood, Providence Yacht Club.

As a result of this new association, a series of elimination races will be sailed on Lake Erie off Cedar Point Aug. 12 and 13, between representatives of the Lake Erie fleet of the Star Boat Racing Association, to pick the challenger in the national championship competition off Long Island sound in September. The races will be sailed over a triangular course of eight nautical miles.

A perpetual trophy, which annually will go to the winner of the elimination competition in Lake Erie waters was given by Allan M. Ernst of Cleveland.

A racing committee which will have charge of the elimination races was appointed. R. A. Luedtke, Toledo, is chairman. Other members are: Commodore Sidney Frohman, Sandusky Yacht Club; Commodore F. W. Wakefield, Vermillion Boat Club; A. L. Carpenter, Maumee River Boat Club and Commodore H. A. Parsons, Cleveland Yacht Club.

Isolated Stars or those not listed, whose owners are not members of the Association, are requested to get in touch with the Class secretary at once in order that they may be included in the official list to be published in the Star Class History.

The Rhyme of the *Captive Maid*

When ocean freights began to soar in the latter years of the war, a British ship which had been stranded in the Straits of Magellan for some twenty years, was floated, repaired and put into trade again, making several successful voyages. The following poem is founded on this incident.—ED.

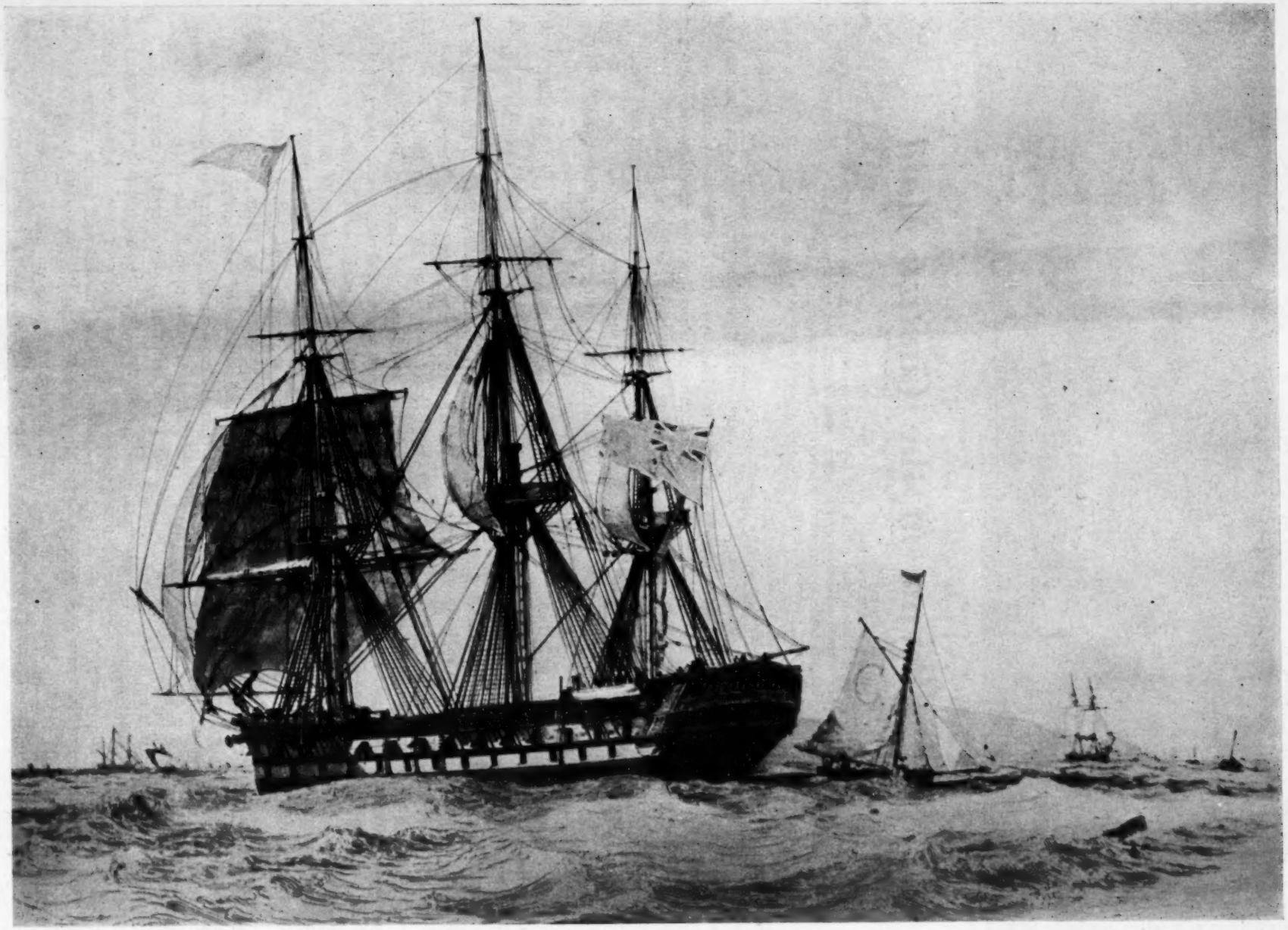
A ship there sailed in the nitrate trade,
And she went by the name of the *Captive Maid* . . .
Built on the Clyde in sixty-nine
For Reid, Macallister's "Maiden" Line;
There was many a shellback used to praise
Her turn o' speed in the old-time days;
But the best of her years were over and done,
And the eighteen-nineties were all but run,
When they hung her up in a fog at last,
On a half-tide reef both hard and fast,
Off Punta Arenas, outward bound
To load up nitrates for Puget Sound.
And they took to the boats, and they rowed away,
And there for a score of years she lay,
Safe and snug in a natural dock
With sandy bottom and walls of rock,
Where the biggest sea that ever did roll,
And the fiercest gale from the frozen Pole,
And the bergs and the breakers passed her by—
Passed her and left her and let her lie. . . .

Nothing to hear but the wild winds crying,
Nothing to see but the grey gulls flying;
A smudge of smoke on a sky-line far,
Sunset, and dawn, and a lonely star;
Frost and fog and the drifting floe,
The beating rain and the blinding snow;
An empty sea and an empty sky,
And a long, long dream of the years gone by!
A score of years—while she lay forgotten,
And her ropes decayed, and her gear grew rotten,
And her planking gaped to the sun and rain,
And her paint was tarnished with many a stain,
And the green mould caked on her idle wheel,
And the rust bit deep in her slumbering keel;
And the screaming sea-birds night and day
Fouled with their droppings each spar and stay;
A score of years . . . while the world went round,
And thrones were shaken, and kings discrowned;
A score of years, till, everyone knows,
The ships they sank and the freights they rose,
And all of a sudden somebody said:
"What about salving the *Captive Maid?*"

They came with hawsers and tugs and men,
And towed her back to the world again;
Back to the world once more—but, oh,
Not the old world that she used to know!
Where were her men that served her well,
Kept her watches and struck her bell,
Learned and humoured her every whim,
Conned and steered her and watched her trim,
Scoured and painted and kept her fine,
Her decks agleam and her yards ashine?
What of her sisters swift and tall?
Time and the sea had claimed them all—
Seas and years and the pirate Hun
Had made an end of them every one . . .
Strange new ensigns on every breeze—
Strange new craft upon all the seas—
A ghost returned to the world of men,
Does she wish herself back on her reef again? . . .

Nothing to hear but the wild winds crying,
Nothing to see but the grey gulls flying;
A smudge of smoke on a sky-line far,
Sunset and dawn, and a lonely star,
Frost and fog and the drifting floe,
The beating rain and the blinding snow;
An empty sea and an empty sky,
And a long, long dream of the days gone by!

C. FOX SMITH.



From an etching by E. W. Cooke

The Thames—East Indiaman.
Built 1828. 1424 tons. James Keith Forbes, Commander.

The *Thames*, East Indiaman

THE finest sailing ships England boasted of in the 18th Century were the big, burdensome and at the same time fast sailing ships of The Honorable The East India Company. Untrammeled by Navy tradition and by Navy discipline the shipbuilders and those who sailed the ships of this Company were very progressive, and made many improvements in ships suited for their particular trade. Much of the development in naval architecture of that period was due to them. They were the first to use the round rudder post that centered over its pintles, doing away with the large open rudder port made necessary by the old-fashioned, square-headed rudder hung with pintles on its forward edge, that required a "coat" of canvas to keep out the water. They also straightened the sheer, carrying the sides of the vessel up amidships, so that the ship would be stiffer in her topsides and not so cut down amidships as were the naval vessels of that period.

The vessels of this Company also used iron knees years before the Navy adopted them, and they carried guns enough to fight off the pirates that then infested the Eastern seas and often attacked merchant ships. Their ships were years in advance of the Navy in dispensing with the excessive tumble home of the topsides, which in the old days was considered necessary in preventing the enemy from boarding, and which gave a steadier ship for the firing of the guns.

Another innovation that can be traced to these ships, was the removal of the galley, or cook's room, from the very bottom of the ship amidships up into the bows of the vessel, where the odors of the cooking would not permeate the whole vessel.

Some wonderful ships were turned out during this period, keeping always in mind the special needs of the trade, which required good carrying capacity, plenty of passenger accommodation, and at the same time speed.

C. G. DAVIS.

A Large Power House Boat

HERE in the United States, with our long coast line, diversity of cruising grounds and different characteristics of the water, conditions require a craft combining the seagoing qualities of a good motor or steam yacht with the more material comforts of a house boat for one who would take advantage of what the coast offers. Light draught is essential for winter cruising in Southern waters, and a fair amount of speed and seagoing qualities are required to enable the owner to make the long runs between the winter and summer cruising grounds. The name "houseboat" is no longer appropriate for the type of craft developed to meet these needs and it remains for some person to coin a new name more truly descriptive.

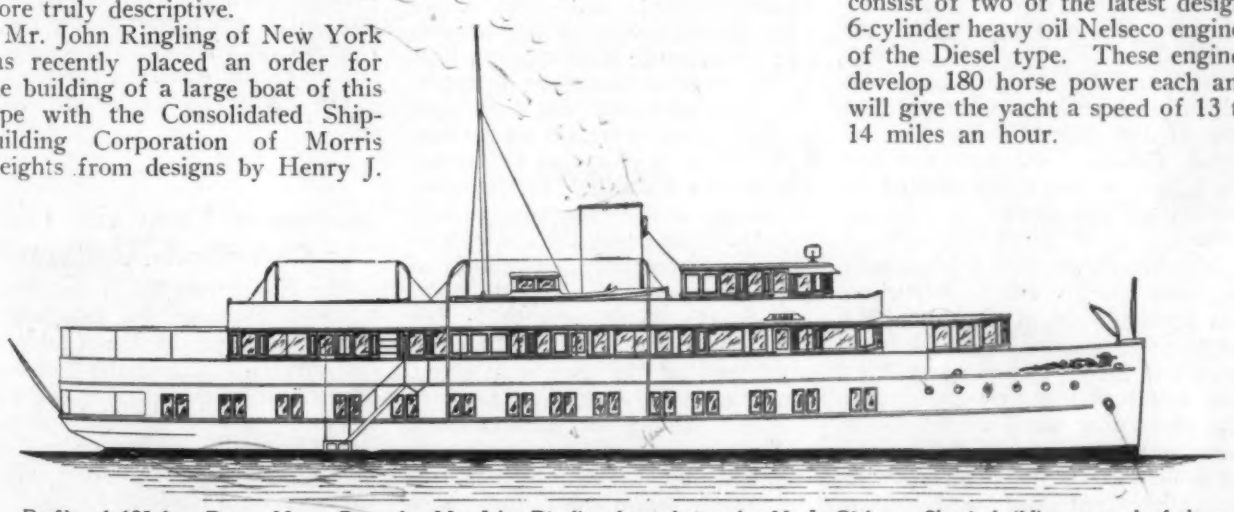
Mr. John Ringling of New York has recently placed an order for the building of a large boat of this type with the Consolidated Shipbuilding Corporation of Morris Heights from designs by Henry J. Gielow, the veteran naval architect, who during the past 25 years has done much to develop this particular type.

The new craft will have an over all length of 125 feet 7 inches; a length on the water line of 117 feet 9 inches; beam 21 feet 3 inches and draught fully loaded, 4 feet 3 inches. She will be constructed of steel, the shell plating being carried up to the upper deck, with steel deck beams and diagonal strapping, thus insuring a thoroughly substantial construction. The lines combine good seagoing qualities consistent with a minimum draft and if it were not for the square windows, would show all the characteristics of a seagoing motor yacht.

The owner's and guests' quarters are forward, occupying the full width of the vessel for a length of 46 feet 8 inches and consist of four large and two smaller staterooms.

The deck house will be 76 feet in length, with a mean width of 14 feet 6 inches. In the after end will be a smoking room. Forward of this, on the starboard side, will be a bath room. On the opposite side will be gun racks, cabinets for fishing rods, tackle, etc. Next forward will be a large galley extending the full width of the deck house, and a pantry arranged with all modern conveniences. Forward of this is the dining room, 16 feet long.

The propelling machinery will consist of two of the latest design, 6-cylinder heavy oil Nelseco engines of the Diesel type. These engines develop 180 horse power each and will give the yacht a speed of 13 to 14 miles an hour.



Profile of 125-foot Power House Boat, for Mr. John Ringling from designs by H. J. Gielow. She is building at yard of the Consolidated Shipbuilding Corporation.

William J. Starr

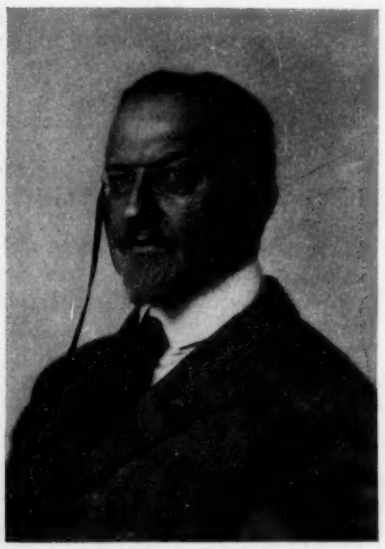
In the sudden death of William J. Starr, on December 13th last, yachting has been deprived of an influence which was always working for the best in the sport and in the development of boats, and American yachtsmen have lost a friend whose place it will be hard to fill. Especially to those who knew him personally will the loss be keenly felt. Apparently in vigorous health, his passing marked him, as in his younger days, still on the crest of the wave of personal achievement, well to windward of a senile decline which would have been for him harder to endure than death itself.

Mr. Starr has been known for years to yachtsmen throughout the country as an able designer and builder of yachts. Working as an amateur in his quiet, unostentatious way, he has been largely instrumental in the introduction and demonstration of a type of off-shore cruising yacht which is yearly gaining in popularity. He started designing and building boats while a young man, confining his efforts chiefly to shoal-draft centerboard boats for use on the lakes of the Middle West. Later, his demands and fancies called for larger and deeper centerboard boats for use on the Great Lakes and on the Atlantic coast. During his active and extensive career as lumberman, land developer, manufacturer, and agriculturist he sought the designing table and the water as a relief from the cares and responsibilities that burdened him.

In the late nineties Mr. Starr designed and built his first large boat, the *Rosamond,* now *Vanadis,* of Chicago. *Vanadis* is a deep, centerboard auxiliary yawl, 60 feet overall and 15 feet beam, a boat which has been known for years as one of the ablest yachts on the Great Lakes. She was (in her day) fast—as was demonstrated on more than one successful cruising race.

Mr. Starr's greatest achievement in yacht design and construction was accomplished in 1912 and 1913 when he completed his well-known auxiliary ketch *Esperanza.* This fine vessel well deserves the opinion of leading naval architects as being a masterpiece in design and construction. A full description of her conception and development appeared in the April, 1913, number of YACHTING.

Mr. Starr carried the dream of *Esperanza* in his mind years before the first oak log for her sturdy frame felt the bite of the broad axe. Many of her timbers were carefully selected by him from standing trees—trees that were absolutely sound and whose natural curves conformed exactly with the needs of the particular parts of the hull for which they were to be used. Mr. Starr was an authority on woods; and in this exact knowledge of the fitness of various woods for his specific needs he chose with unusual care and foresight. Such choice woods as teak, mahogany, osage orange, black walnut, tamarack, locust and others were used unsparingly where needed or desired. The timbers of *Esperanza,* after several years of seasoning, were shaped and set up in Wisconsin. Later, they were knocked down and shipped to Maryland, where they were again erected, this time on the shores of his own estate bordering Chesapeake Bay. Here, with the assistance of expert ship carpenters and his own sons, he worked many months on the construction of a powerful hull capable of withstanding the greatest stress and at the same time equally capable of charming the eye with its grace and symmetry. The lines of *Esperanza* are, like those of all of Mr. Starr's boats, remarkably fair and easy. The moderate convex overhangs at the bow and stern, the sharp, easy waterline forward and aft, making for good entrance and clearance—and the very easy diagonal sailing lines, together with the deep centerboard hull with plenty of inside and outside ballast, make for a type which is fast, able, pleasing to the eye and practically uncapsizable. Today this yacht survives as an enduring evidence of Mr. Starr's genius as a yacht designer and builder.



William J. Starr.

Mr. Starr strongly favored the centerboard boat, appreciating the advantages of this type for interesting shoal water cruising. His models were so patterned with the idea of fairness and depth that, with sufficient ballast and proper rig, they were able and practical as deep sea cruisers. His boats were fundamentally good sea boats—boats which, like *Esperanza,* were capable of going anywhere, on any seas. The following extract from a letter written by one of the foremost yacht designers of the country expresses, in a few words, an appreciation of Mr. Starr's contribution to naval architecture, particularly in reference to the shoal draft, deep hulled, centerboard type of off-shore cruiser: "It seems to me that you and ——— together have done more than anyone else for a type that is little known and yet has enormous possibilities."

During the last few years of his life, Mr. Starr showed a strong interest in a type of boat constructed on the pattern of the Chesapeake Bugeye—a double ended, centerboard boat with modified Bugeye rig.

Mr. Starr was a man of unusual genius, keen judgment and abundant knowledge. He was a prodigious reader and always took keen interest in literary undertakings. He was an artist at heart and shaped the works from his busy hands with an artist's skill and sense of proportion and beauty. With all these qualities he was a man of simple tastes. He was by necessity a cosmopolitan, but with all his travel and large acquaintance the great love for his wife and family was a dominant and enduring force.

His place in yachting cannot be filled.

Shattemuc Yacht and Canoe Club Elects Officers

The Shattemuc Yacht and Canoe Club of Ossining, N. Y., held its annual meeting at the Clubhouse on January 6th, and the following officers were elected for the year 1922: Jesse L. Gorrell, Commodore; Ralph K. Cotton, Vice-Commodore; George Beisheim, Rear-Commodore; Herbert C. Gerlach, Treasurer; J. D. Van Wart, Secretary.

Sea Chest—And How to Build Her

By D. S. SIMPSON, M.E.

PART III, *Continued*

WHEN the wooden keel, stern and transom are set up it is about time for a trip to the foundry, but if the iron keel isn't ready we can proceed with the moulds. These are temporary but must be strongly made, of lumber which will hold nails and keep its shape.

These moulds are located on stations 1—3—5—7—9 and give the shape of the ship (inside of planking) at those points. No. 1 can be made of one board to a side but the rest will require two boards each. Needless to say both sides of the ship, hence the moulds, must be alike and it is easy to make it so if the corresponding boards of both sides of the mould are tacked together and shaped as one. Don't forget to notch them over stem or keel cap to reach the bearding line.

When all the pieces for one mould are cut, lay them out properly on the floor; see that the L.W.L. and sheer line are marked on them, check carefully for width at these points and nail together, using cleats at the joints and a stout stretcher or "cross pawl" at the sheer line, also a couple of diagonal braces to keep it from getting out of shape. Mark the centerline on the cross pawl and at the keel.

If the iron keel is now finished, gather your friends around to help get it into place. First, fit to the wood—or rather fit the wood to the iron. Block the keel up on its side and clamp the iron in position; then, using it as a jig, bore through the wood for the bolts. The holes must make a driving fit as before. You will note that they go clear through the heavy floor timbers on top of the keel and it is immaterial whether you bolt these timbers in place now or set up the bolts temporarily on plenty of washers (which may be wooden blocks). Dose the bolts well with red lead before driving.

Using Concrete Keel

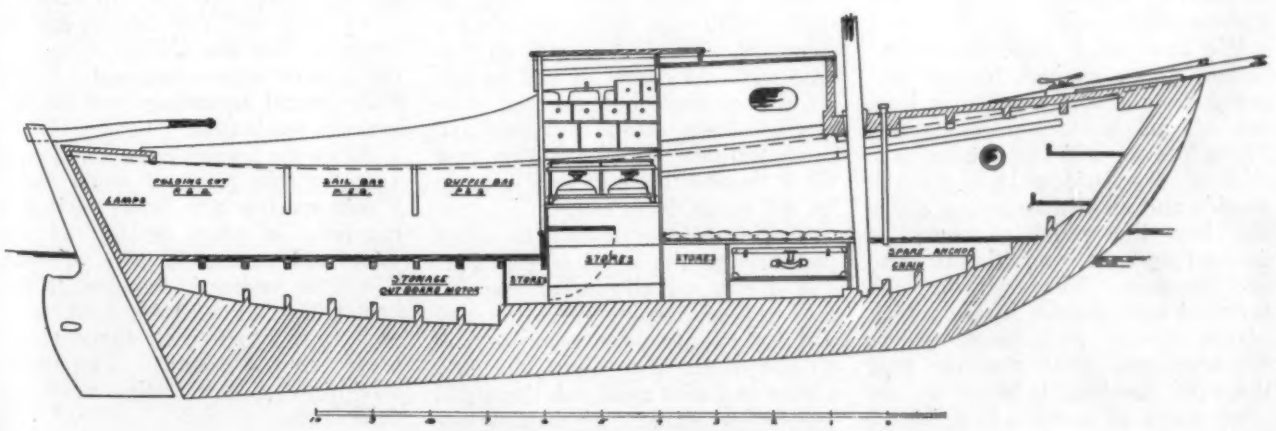
You are now ready to set up the job unless you are one of those who have elected to try the concrete keel. Here the stem, knee and cap are the same as before with the addition of a short piece of timber for the forefoot. Both the forefoot and sternpost are rabbeted to take the keel boxing. The keel frames are mere pieces of oak cut to required shape. Cut the sides to pattern and nail lightly to the frames. Fit sternpost and forefoot and nail in place. Nail the bottom board well to sides and bore through bottom board and frames for the bolts. Now put two, three or four ⅜" bolts (as space permits) through the sides and frames, keeping clear of the keel bolt holes. It is better to rivet these over washers than to set up on nuts.

The cap can now be tried in place and the upper edge of the sides worked to a good fit all along, and you are ready for the ballast. Collect six or seven hundred pounds of good iron scrap. The best possible is the punching from steel plate, but anything will do as long as the pieces are small. Mix up a good watery concrete of equal parts cement and sand to four parts of scrap. Be sure that every piece of scrap is well coated and shovel into the keel leaving the last compartment vacant. This mixture must be tamped well into place and scraped carefully true with the top of the sides. In a couple of days the rest of the wooden keel can be assembled and then is ready to set up.

Having completed the transom, moulds and backbone (either type), we are now ready to set up the boat. So that we can work under her more or less comfortably, the waterline should be put up about four feet from the ground and this means considerable blocking under the keel. Balks of timber can usually be found lying around the shore. They need be but a couple of feet long, but should have the opposite sides flat and parallel. Where one is piled on another, they should be well cleated together and all of them must be firmly bedded in the ground so that they will not settle or slip under the boat.

About four piles of blocks are needed and their heights can be pretty well determined from the drawings. After the keel is on the blocks and temporarily stayed in place stretch a line between stem and stern on the L.W.L. marks and wedge up one end or the other of the keel until this line comes level. (In driving wedges under the keel start one from each side, otherwise the keel will shift sideways.)

The keel must next be set "up and down" and a plumb bob and line on stem and stern post will get them right; the other half of the job is to hold them there. If you are working in a building, this is easy by nailing stays to the roof, walls or floor, but if you are out-

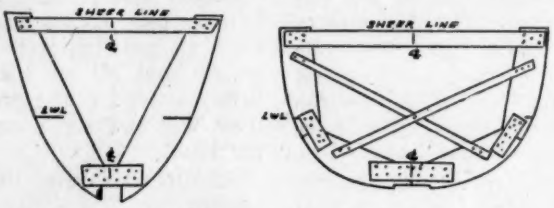


Inboard profile of *Sea Chest* showing details of construction.

doors, it will doubtless be necessary to drive stout stakes in the ground to which you can nail the ends of the stays.

With the water line level and stem and sternpost plumb there is left one check on the job. Stretch a line over stem and stern post on the exact centerline of each. On this line hang a plumb bob, and if the job is right this plumb should hang over the centerline drawn on top of the keel everywhere in its length. If it does not, you are somewhat out of luck as the error is probably in bolting the stem and forefoot to the keel. The keel may be sprung, but it is too short and heavy to force back again. This is an error that is easier corrected before it is made; however, it is a satisfaction to check up and have it right.

If the transom has not already been put, get it fastened in place.



A PAIR OF MOULDS

It must be shored or stayed so that it is square to the centerline of the boat. Then get the moulds out and put them in. Moulds No. 1, 3, and 5 should be set forward of their station marks and 7 and 9 aft of their station marks. They should set plumb fore and aft, square to the centerline of the boat and have their own center lines plumb sideways or thwartship. A fourth condition is that they shall set down on the keel so that a batten laid on their edges will extend naturally into the rabbet. They should be well fastened to the keel and stayed to each other, to the roof, floor or stakes in the ground. The point is to get them firmly held in position so that they cannot shift. Time for a photograph again.

We now need some nice clear battens about an inch by one and one-quarter and if possible at least two 1¼ in. square and 22 ft. long. These last we will run one on each side of the boat outside of the moulds and about two inches above the sheer line which of course is marked on every mould, the stem and transom. They will be well fastened with screws in the rabbet of the stem, to each mould and to the transom. Note that the true shape of the boat is given by the after edges of moulds 1, 3, and 5 and the forward edges of 7 and 9 and that the moulds will have to be beveled to let the battens into these edges. Also the transom will have to be beveled to let the batten reach its after edge.

The other battens can now be put on about a foot apart down the moulds, putting first one on one side then one on the other to equalize the strain as much as possible. If battens long enough to reach the full length are not at hand they should be lapped for at least three moulds so as to keep a fair curve. it is not necessary to fasten two parts of the batten together. They can lie close together and be fastened to the moulds. If a knot or weak spot throws any batten out of a fair curve, discard it and use another.

Our job will look something like the sketch, and we are now ready to put in the ribs or frames. First mark their positions on the keel and upper batten noting that the six frames are a bit closer together along the keel and further apart, so as to divide the space, along the sheer.

We will now have to stop boatbuilding long enough to make a steam box. This article has been described many times, and it does not matter in the least how you make it as long as you provide a means of making steam low pressure (two pounds is enough and a wash boiler will do it) a reasonably tight box to confine the steam and big enough to hold five or six ribs (say six to eight inches square and eight feet long in this case) and a hose to connect the two. One end should be fitted with a door or stuffed with rags while the ribs are steaming. The box should be covered with old carpet or can be laid on the ground and covered with sand to keep down radiation and condensation. In the latter case tilt it toward the door end so as to let the water drain out.

The idea of the steam is to soften the fibres of the wood so that they will stretch and slip in bending and any way of keeping them hot and wet for twenty minutes or so will do the trick. Sea Chest has easy curves and with good oak there will be little breakage. By putting one piece in as you take one out the process will be continuous except for pauses to stoke the fire. Do not leave any pieces in over night and try to use them up after they have been once steamed. A second steaming is not good.

The actual framing requires two men and next Summer's deck hand can now begin to earn his passage. Get all your clamps handy and put him inside the boat with a hammer and some tenpenny galvanized nails. When a rib is sufficiently steamed rush it to him, passing it inside the boat so that it rests on the upper batten and the keel. The lower end must be previously sawed to lay properly on the keel. He will hold it in place on the keel with one foot and with the other foot and knee and two hands push it gently into place against the battens, you assisting where needed. When it approaches the battens get a clamp on the lower two and pull it down, then work from the bottom up until it touches all the battens and shows a fair curve. If it humps take it out. If it looks all right and is approximately on its marks nail it to the keel with one nail. Do not nail it elsewhere or remove the clamps until it is cool and dry, as it is liable to pull away in drying. Look it over occasionally. Sometimes hitting the upper end will help to set it in position. (Note that the rib does not cross the keel, but just rests against the edge. The real fastening is obtained by the floors.)

After two or three ribs have been put in on one side, put in their mates on the other side. Get your early practice in the middle of the boat where it is easiest.

Where the frames do not rest on top of the keel but fasten to the sides of the stem forward they must be beveled as close to a fit as possible before steaming so that they can be put in hot like the others. Some of them will require twisting to lie close to the battens and a monkey wrench will help.

As they cool the clamps can be removed and the frames nailed to the battens where required. Especially sound fastenings can be put into the top batten.

After the frames come the floors. Using a thin piece of wood make a pattern for any floor, fitting it carefully in place on top of the floor and against a pair of ribs. The floor proper is fastened to the keel with two 5-16 in. drift bolts and to each rib with three rivets made from 20d nails. The floors carrying the keel bolts need no drift-bolts.

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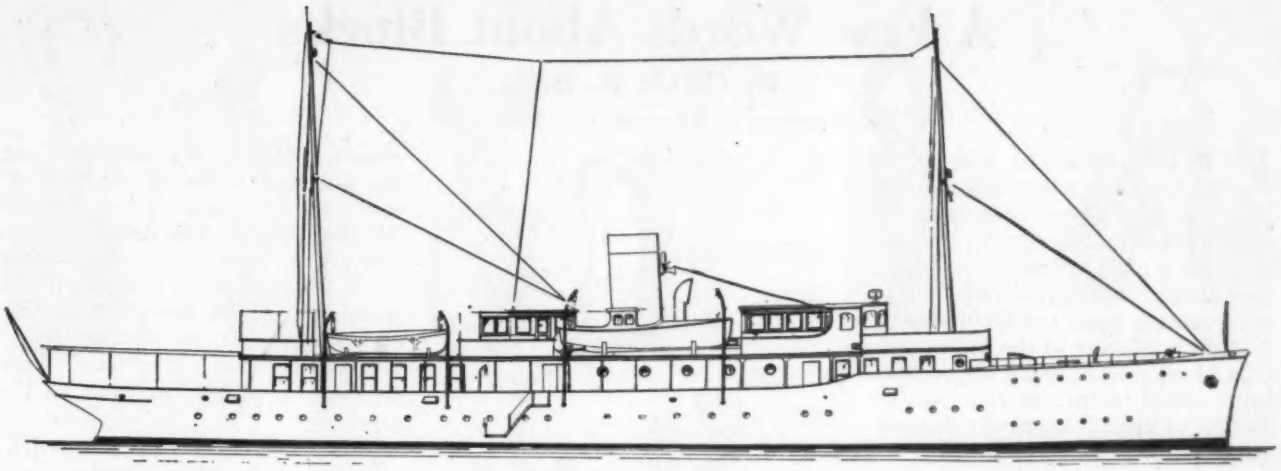


The Largest Full Powered Diesel Yacht in the World

YACHTING has naturally been greatly affected by the changed economic conditions resulting from the World War. The higher cost of living, large income taxes and reduced incomes have caused even those who can still afford to run large and extravagant yachts to consider their expenditures much more carefully. The trend of design is away from the pre-war floating palaces with their enormous first cost, large crews and high cost of operation. The demand is for yachts equally fast, seaworthy and comfortable but of lower first cost and greatly reduced operating expenses. This has been made possible by the development of the Diesel engine, which has now reached a stage where it is quite as dependable as steam for vessel propulsion and has earned its place in the Merchant Marine as well as for pleasure vessels.

A definite proof of the growing popularity of the large cruising yacht equipped with Diesel engines is seen in several vessels of this type now under construction. In fact, all the large power craft of the year are to be Diesel-driven.

The largest and, perhaps, the most notable of these vessels, the plans of which are published herewith by permission of the designers, Cox & Stevens, is now under construction by the Newport News Shipbuilding & Dry Dock Company for a prominent western yachtsman and will be delivered early next Summer. She will be christened *Dolphin*.

The requirements of the owner, which have been followed carefully by the designers, were that the vessel should be an excellent sea boat, have extremely comfortable living quarters, relatively high speed, be economical in operation and suited for coastwise cruising as well as for offshore voyages.

The principal dimensions of this vessel, which when completed will be the largest full powered Diesel engined yacht in existence, are:

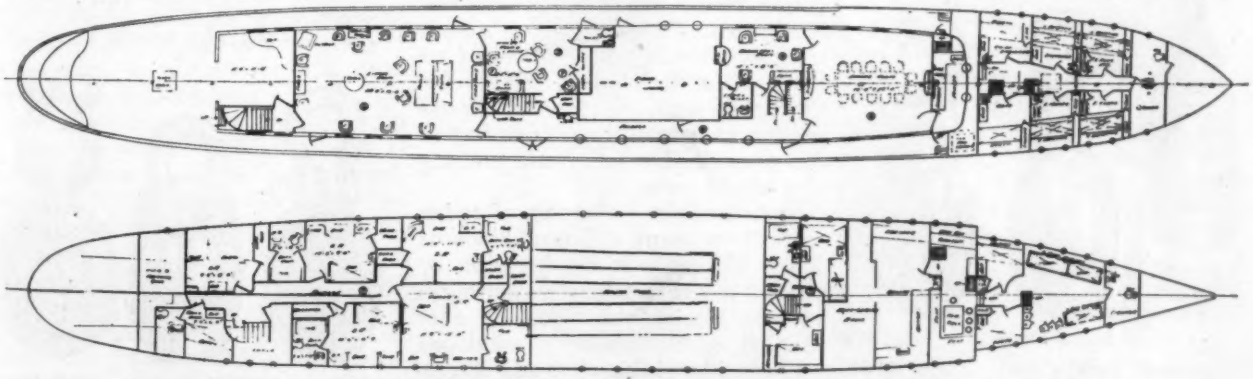
L. O. A., 180 feet; L. W. L., 170 feet; beam, extreme, 24 feet; draught, 9 feet.

The motive power is to consist of two 8-cylinder full Diesel engines of 500 H. P. each, at 250 R. P. M., made by the Winton Engine Works. These motors are compact, relatively simple in construction and capable of being operated by engineers of ordinary training. The fuel economy is such that although the maximum speed in the usual condition of service will be in excess of 16 miles an hour, it has been possible to provide sufficient oil bunkerage for a cruising radius of 6,000 miles. The equipment of auxiliaries is very complete and includes an unusually powerful electric light installation, cold storage plant, forced ventilating system, electric windlass and boat hoists as well as a powerful wireless equipment.

An inspection of the plans shows that, in a general way, the new vessel is a development of the type created by the *Nourmahal,* built last year, namely, a flush deck vessel with raised forecastle, having good beam, ample freeboard, and a relatively large displacement for her dimensions. She will be in every way wholesome and capable of going to sea and staying at sea for extended periods with the maximum of comfort for those on board.

An inspection of the model shows that she has a rather full midship section with a fine entrance, clean run aft to the propellers, a very

(*Continued on page* 185)



Accommodation plan of main and berth decks of 180-foot Diesel powered yacht, designed by Cox & Stevens.

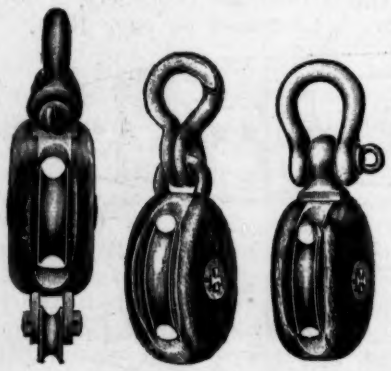
A Few Words About Blocks

By CHAS. H. HALL

Illustrations by courtesy W. H. McMillan's Sons.

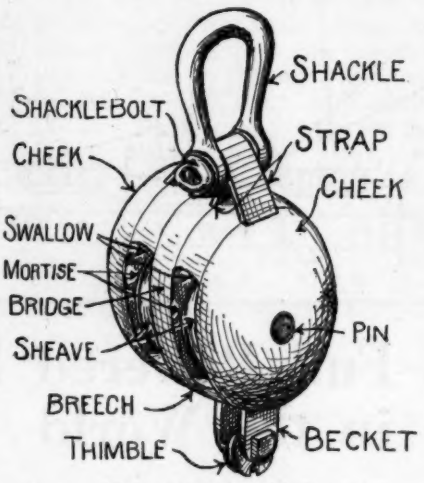
FOR the yachtsman who thinks of blocks as something through which to lead a rope and to scrape and varnish in the Spring, we recommend a peep at the Encyclopedia Brittanica. That good old standby says, among other pertinent things: "There is nothing in the appearance of a block which, to an unpractised eye, would seem to require any stretch of mental ingenuity or manual dexterity to manufacture. It is a machine apparently so crude in its structure, and so simple in its contrivance, that the name was probably given to it from its general resemblance to a log of wood, as is obviously the case with a butcher's block, a barber's black, the block of the executioner, etc." It then goes on for two or three pages to tell about the block-making machinery designed by Brunel in 1799 and installed some seven years later, after the inventor had battered his weary way through all the red tape of the British Admiralty and finally succeeded in getting the ear of St. Vincent, the First Lord. Brunel's machinery was one of the wonders of the British naval world for a great many years, for Mahan tells of a visit to Portsmouth and of the wonders of the apparatus and, incidentally, of the admiration expressed by a visiting British officer for one of the American ship's plain, iron-strapped blocks, in the words, "Now that's what I call a sensible block. I wonder why we can't get such blocks in our service."

Blocks are almost as old as sails and are found in the rigging of the craft of primitive peoples all over the world. They doubtless began as chunks of wood with holes in them and attained substantially their present form centuries ago.



Single Blocks

With front Shackle and Becket | With side Sister Hook | With side Shackle



The parts of a block

When all the seaborne commerce of the world was carried in sailing vessels, when the fighting fleets of the maritime nations were also dependent on the wind, blockmaking was an important industry and a ship's blocks were a considerable item of her cost. In those days, most of the blocks were shaped from a single piece of wood and were rope strapped. Today they are built up and are iron strapped, or are entirely of metal. The old books on seamanship give minute directions for strapping blocks: "Once and a half the round of the block for the common strap" or "Take four times the round of the block with the rope to be used" for a grommet strap, the point being that the blockmaker supplied only the block, sheave, and pin; the seaman fitted the particular sort of strap which tradition called for. Similarly, the seaman started with spars and rope and rigged his ship; he was an expert in all such work.

And what a variety of blocks those old time hookers had! Blocks "of all shapes and sizes, great and small." Cheek blocks, clump blocks, chunk blocks, shoe blocks, dasher blocks, sister blocks, secret blocks, telegraph blocks—how many of us know what they looked like or for what they were used? And the old shellbacks would fit each one just in the prescribed manner and nothing else would serve.

But does the yachtman of today know how many different kinds of block his craft is rigged with, or realize the care taken in writing a correct block list? Has he ever studied a blockmaker's catalogue and considered the whys and wherefors of all the varieties of blocks shown therein? Or reasoned out the different styles of shackles fitted? Or are they all just blocks? All these things the designer must know and specify, so that every block on the yacht will be of the proper size, have the proper fitting and stand with its sheave in the correct position, otherwise there will be a foul lead in some of the gear.

But let us begin with a few definitions. The modern wooden block is a built up affair and is made of selected, well-seasoned material. As weight aloft is undesirable, yacht blocks are usually of ash, though sheet and lead blocks are generally of lignumvitae. The two side pieces are the cheeks and, with the end pieces between them, make up the shell. They are fastened together with screw wire, the ends sometimes being riveted over. The space between the cheeks is the mortise and is occupied by the sheave, with, of course, some clearance on each side. At the upper end of the block is the swallow—the space between the sheave and the end of the shell, large enough to pass the rope. The size of the swallow determines the size of the rope which may be led through it. It is always well not to figure too closely on this but to get blocks that are big enough. You remember the old seaman's curse, "Light and variable head winds, large ropes and small blocks."

The end of the block opposite the swallow is called the breech and at this end the sheave just clears the inside of the shell. The score is cut in the shell to take the strap which, nowadays, is usually of iron and inside of the cheeks. Some yachts have the upper blocks of the main sheet fitted with a wire rope strap. This makes rather a neat, snug job but it takes a real rigger to do it well. The sheave turns on the pin which is usually

With front Shackle | With Lashing Eye | With Upset Front Shackle

Single Blocks
With Long Front Loose Hooks

With Front Coleman Hook

Peak Halyard Block with Tongue for Bridle

Sister Block with Stiff Hook

Single Block with Eye and Thimble

Double Jib Sheet Blocks, Fore and Aft.

bushed with bronze, bronze with graphite insets, or is fitted with a roller bushing. A cap, generally bearing the maker's trade mark, goes over the end of the pin. Blocks are classed as single, double or treble as they have one, two or three sheaves. Occasionally fourfold blocks are met, though seldom in yachts. The slabs of wood between the mortises of a double or treble block are the bridges.

So much for the block itself—the wooden block, at least. Now let's have a look at the fittings and attachments, for here is where a lot of the variety comes in. In the ordinary single block the strap is a flat bar which runs up inside of one cheek, turns over at the top and runs down inside the other cheek. The pin goes through it and the lower end is cut off flush with the end of the shell. Through the bend of the strap goes the bolt of the shackle, so that the shackle lies in the same plane with the sheave. This means that the eye in the spar ironwork must be big enough to pass the eye of the shackle. Now if the block is to be the upper one of a single purchase there must be some means of fastening the end of the rope, so the ends of the strap are extended beyond the breech and a bolt is put through them, with a thimble on it, forming a becket.

But suppose the block has to stand the other way? Evidently the regular shackle will not answer, so the strap is forged into a solid chunk at the top and the shackle bolt goes through a hole in it, a "punched edge." Perhaps there is only a round hole in the ironwork instead of an eye? Then the shackle must be upside down and the loop in the strap must be large enough to pass the eye of the shackle. It must also be shaped to fit the shackle to prevent contact at only one point, which would mean rapid wear in service. If shackle and sheave are to stand at right angles, the block must have an "upset side shackle," which means that a rounded eye is forged in the upper end of the strap. So here we have four varieties already, single blocks without any beckets. But the manufacturer would be happy if he had but four kinds to make.

Suppose there is not room for a shackle, or that for some reason the block is to be lashed in place. Then the loop of the strap is worked into a roomy eye, "lashing" with smooth curves and no sharp edges to cut the lashing and with plenty of room to pass a lot of turns. Such a block is often used for the jib downhaul.

Often a block is fitted on the end of a pennant—a masthead runner or topmast backstay, for instance. In such a case the block must be fitted with a thimble for the rope and the designer must specify whether this thimble is for wire rope or manila. In some big yachts the thimble is of heavy pattern and made of cast bronze.

Then there are all sorts of hooks fitted to blocks. These hooks are of various shapes but a good hook has plenty of metal on the bow, where the greatest stress comes. There used to be an illiterate blacksmith down near Erie Basin who had a heaven-sent eye for forging hooks. He would get the "meat" where it was wanted and then taper the hook off gracefully to a good eye and a good point with the tip turned back just right for the mousing. His father once referred to him as "the best forger on the water front." Those were the days when we'd buy a set of blocks and have the local smith make the fittings to our sketches or directions. Instead of blueprints he'd work to sketches in chalk on the door or walls of the shop. Near him was a carver who was certainly an artist when it came to getting out a nice set of trailboards—but he used to get off on a wild tear every Spring when his first job or two had been paid for and neglect the shop for weeks at a time. That's why the old schooner *Emerald* went all her first season without any trailboards, just the bare stem head—but we digress.

To come back to hooks. There are stiff hooks and loose hooks, pointing to the front or the side. Swivel hooks, pigtail hooks, sister hooks, Coleman hooks, slip hooks and goodness knows how many more. Each has been developed to meet some particular need in a ves-

Anchor Cat Hook Block

Snatch Block with Swivel Hook

Lead Blocks with Deck Bolt

sel's rigging or gear. The stiff hook is forged integral with the strap and may point to the front, so that it stands in line with the sheave, or to the side, at right angles to it. They are not much used in yacht rigging, loose hooks being preferred. Loose hooks also may be had either to the front or side. They are made with eyes through which the strap of the block goes and are long or short, heavy or light. Blocks fitted with loose hooks are used for reef tackles, the lower blocks of runners and backstays, topsail tack purchases and watch tackles. The pigtail hook is a twisted affair with the point of the hook curled over toward the bow so that it does not unhook without being turned upside down. It is sometimes used for the lower block of jib or staysail halyards, though a large wide shackle through a lashing eye is more secure and only a trifle heavier.

Then there are swivel hooks, both stiff and loose. These are used for halyards jigs—though some dislike swivels on jigs—and for the lower blocks of boats' falls, though one of the thousand and one forms of patent releasing hook is apt to be found there.

Sister hooks are frequently used in place of shackles, but are not as strong. They may be either front or side and will hold without being moused—as long as the stress on them is a steady one. The hooks are usually too light, however, and shackles are preferable. The Coleman hook is much better, as the end of the hook goes through the other part and is secured by a bit of rope or rawhide.

For the gaff blocks of peak halyards there have been a number of different fittings. In the old days, these blocks were on the gaff, but as spars grew lighter the advantage of the bridle in distributing the pull of the halyards along the gaff became apparent and the inventors got busy. The old style of bridle fitting was practically a becket and it made a sharp nip in the bridle and was in the way when the sail cover was to be put. There was no way of getting clear of it short of unreeving the halyards or slacking them up so that the bight could be pulled in to the mast. Then one leg of the becket was made to turn on the pin, so that the bridle could be slipped out. This was an improvement, but there was still the sharp nip on the bridle when the sail was hoisted. Then the bridle attachment developed into its present form, with what is practically a metal dumb sheave for the bridle, and fitted so that one side of the gadget may be swung out of the way when desired but is secure when the sail is up. This fitting has lengthened the life of wire gaff bridles.

For sheet blocks there are a number of special fittings. The jib and staysail sheets have a special heart-shaped shackle, each block of the pair occupying a lobe. These blocks may be made with their sheaves standing either athwartships or fore and aft. There is also a fitting for the clew of a jib with a shackle and bolt through the sail and a separate eye for the strap of each block. The traveller block of the fore and main sheets may have a ring or a special traveller shackle. The quarter lead blocks have a bolt through the deck, its eye worked through the eye on the end of the strap or with a hinge arrangement permitting the block to swing in only one direction. A rubber washer or inverted rubber cap is fitted to keep them from banging on the deck.

Special blocks are used in certain places aloft where there is a chance that a block will bang against a spar or another block. Jib sheet blocks —the ones on the clew of the sail— are generally "round" blocks, that is, they have thicker shells to stand the banging they often get. The block on a short pennant at the jaws of the gaff for the topsail sheet is often of the same type. Then there are fiddle blocks for runners and back-stays, though these are rather out of style now. The fiddle block has two sheaves of different sizes arranged not side by side on the same pin but one above the other, the larger one uppermost. They were quite fashionable twenty years ago.

Blocks are sometimes made to fit against a spar, in which case they become chocks, the spar forming one side of the shell. Sometimes one is made with the shell thickened and flattened on one side to fit against the side of the centerboard trunk, the block being complete in itself. Sometimes a block is fitted to the top of the cabin house for the centerboard pennant. The shell is of special form and is as much like the old-fashioned secret block as anything we see today.

Snatch blocks are used for temporary fairleaders. They have one side of the shell cut away at the top so that the bight of a rope may be dropped into them. Some are fitted with rope straps, the strap securing to a hole in the extension of one cheek. The usual type has an iron strap and hook and a link that swings over a nib on the end of the short cheek. When there is no strain on it, the block may be swung up so that the link may be unhooked and the rope dropped in. Then the link is hooked and it cannot unhook as long as there is any strain on the block.

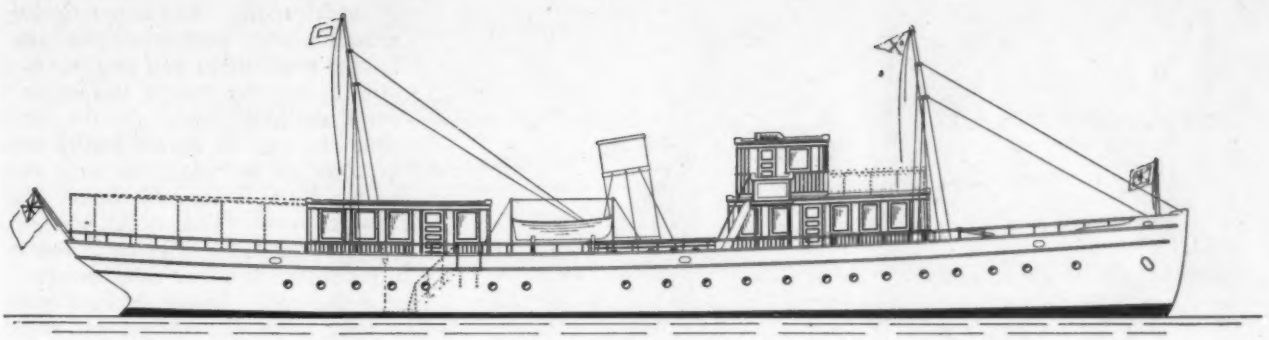
Blocks aloft usually have ash shells to save weight. Blocks on deck or sheet blocks are usually made with lignumvitae shells as it is stronger than ash and better looking. Sheaves may be of bronze or of lignumvitae. Bushings are of different types. Where the rope must render freely and quickly, as in sheet blocks, the "patent" or roller bushing is preferred; where there is considerable stress, as in halyard blocks, the solid bushing with insets of graphite or metalline is the favorite.

Metal blocks have come into use in the last few years, particularly for small craft. They are either of bronze or galvanized iron and are smaller than the wooden blocks for the same size rope. Some consider them neater looking, but this is a matter of taste. A polished bronze block may be well enough, but a green-coasted bronze or a dirty galvanized one may be quite depressing. The bronze ones are expensive and the yachtsman is apt to make the mistake of getting them too small. This means trouble when the rope gets wet and swells.

For wire rope running rigging special metal blocks are sometimes used where weight is of great importance, but flexible wire rope will work perfectly well in the ordinary block if the sheaves are cut with the proper score and made the same diameter as for manila of equal strength.

The blockmaker also furnishes mast balls and trucks, with tiny sheaves for the signal balliards, bees (chunks of wood with holes in them used as fairleaders), suphroes (long pieces of hard wood with a series of holes for the crowfoot of an awning) belaying pins and so on.

Blocks must be properly cared for. Just because your blocks were all right last season, don't assume that they are all right to run another season with a mere scraping and varnishing. Back the pins out and look them over, also the bushings, and renew any that are worn or cut. It is foolish to take chances with any of your gear; it may go all right, but it may let go just at the worst time. And don't scrimp when getting new blocks. Go to a good manufacturer and get the best he makes, it will pay in the long run. Poor gear is a nuisance anywhere, but is a menace aboard a yacht.



A Large Power Cruiser for the West Coast

DURING a short trip to the West Coast last autumn one of YACHTING'S staff inspected the construction of a large, full powered cruiser, the plans of which we are able to show in this issue, through the courtesy of her designer, Edson B. Schock, of Vancouver, B. C.

This yacht is by far the largest of her type ever constructed on the Pacific Coast, if not the largest in this country. She is being built at Vancouver, B. C., for the Powell River Co., and will be used by their manager, Mr. Norman R. Lang.

She is 132 feet in length over all, 125 feet on the water, by 19 feet beam and 8 feet draught. She is built of wood and will be driven by two 200 H.P. Fairbanks-Morse engines of the so-called semi-Diesel type which are expected to give her a speed of 15 miles an hour, and she carries sufficient fuel for running 2,500 miles at this speed. In addition to the main propelling engines she has an independent electric generating set and two extra electric generators driven off the main engines; a 110-volt Edison storage battery set; two motor-driven air compressors and two motor-driven rotary pumps, one of which will be connected to sea water for fire purposes and for washing down decks.

In the construction of this yacht it was extremely interesting to notice that the keel and keelson were in one length, being about 12 x 16 inches and 110 feet long. Her planking is of Port Orford cedar, while her decks are of teak, as are her bulwarks, rails, houses, skylights and in fact everything above the sheerstrake except the bulwark stanchions, which are of Australian iron bark or gum.

She has two deck houses, the after house being fitted up as a saloon with open grate yacht stove, piano and lounge, while the forward house is fitted as a dining saloon with buffet and galley.

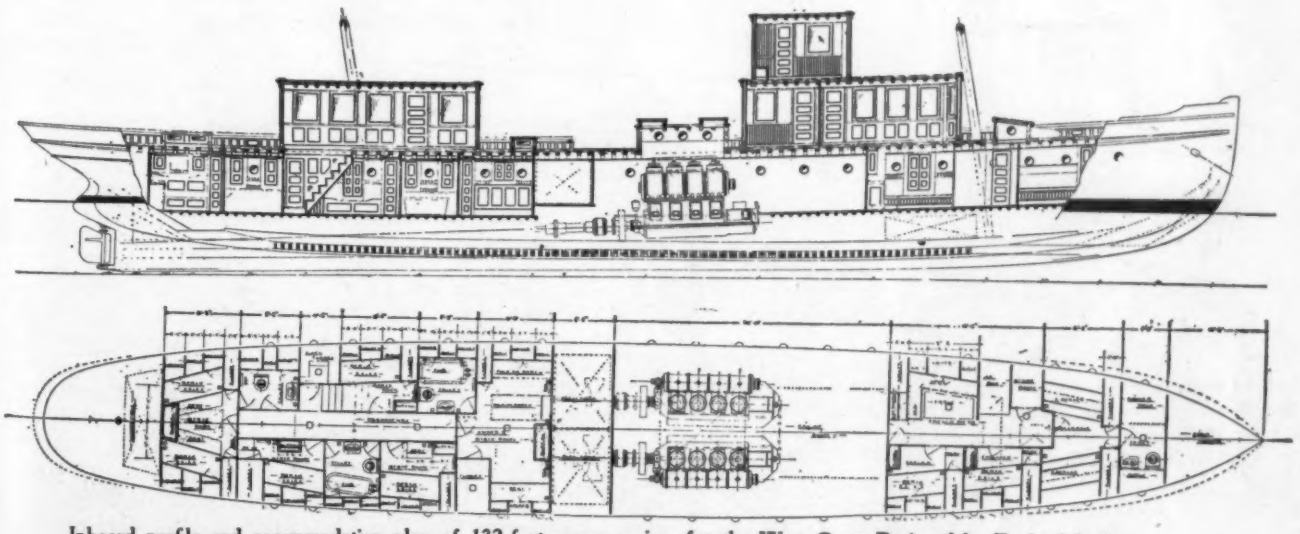
The owner's stateroom is located below at the forward end of the passageway, and occupies the full width of the yacht. This room contains two beds, seat, bureau, and closets and is finished in bird's-eye maple, a wood much used for the cabins of our old clipper ships. Opening off this room, on the port side, is a private bathroom.

On the starboard side there are two single staterooms fitted with berths, seats, bureau, and clothes locker, and having a bath and toilet room connecting with each. Opposite, on the port side, is another single stateroom and a large linen closet opening off the landing at the foot of the stairs. The double stateroom aft is finished in teak and contains two berths, lockers, closets, seats and bureau.

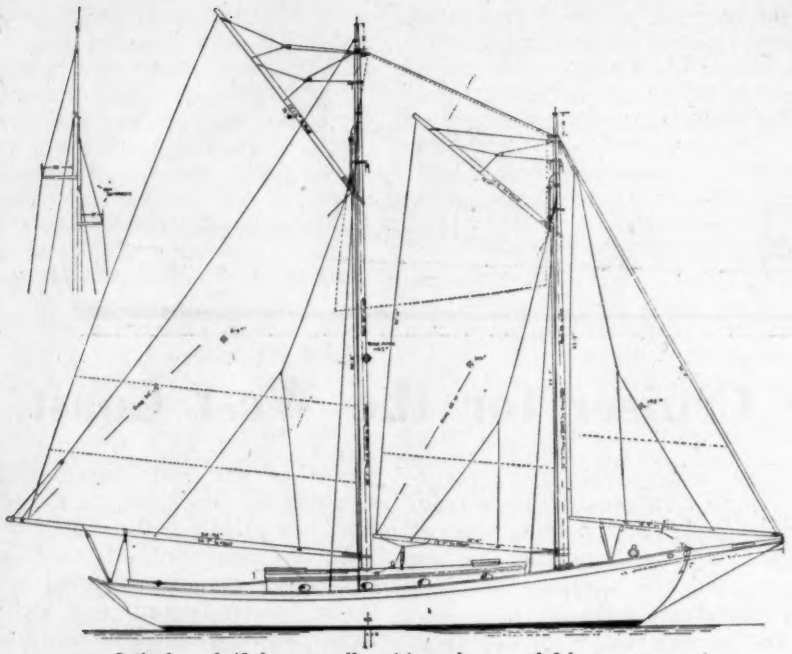
The quarters forward consist of captain's and engineer's rooms, a forecastle for four men, crew's mess, ice box and storeroom. The yacht will be heated by hot water system with radiators in all rooms. Hot, cold and sea water will be supplied to all tubs and wash basins.

In type this yacht resembles somewhat a small "liner" with her nearly straight stem and elliptical stern, showing a beautifully moulded stern profile of the modern type.

We will be able to show pictures of the yacht, both exterior and interior, in an early issue.



Inboard profile and accommodation plan of 132-foot power cruiser for the West Coast. Designed by E. A. Schock.



Sail plan of 45-foot overall cruising schooner of fisherman type.

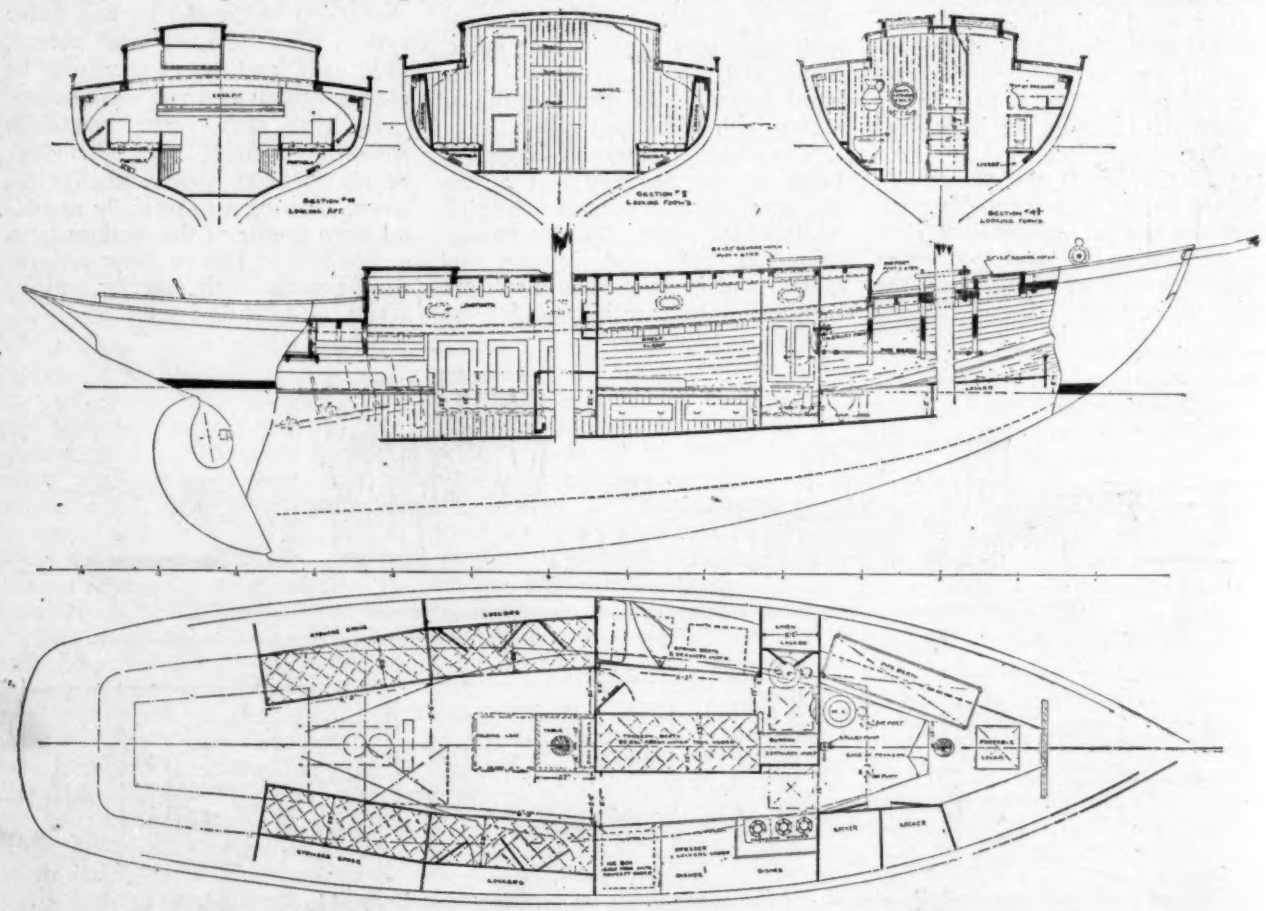
A Small Fisherman Type Cruising Schooner

Another little cruising schooner of the fisherman type that will make a hit with the cruising yachtsman who wants something in which he can cruise on open water, is a 45-footer, designed by John G. Alden of Boston, for Prof. Henderson, of Yale, and at present building down in Maine. This little boat is a larger addition of the two *Malabars,* which this designer has recently turned out, and yet she is small enough to be handled without a paid hand if desired, or with one man if the owner wants to carry a hand to help out.

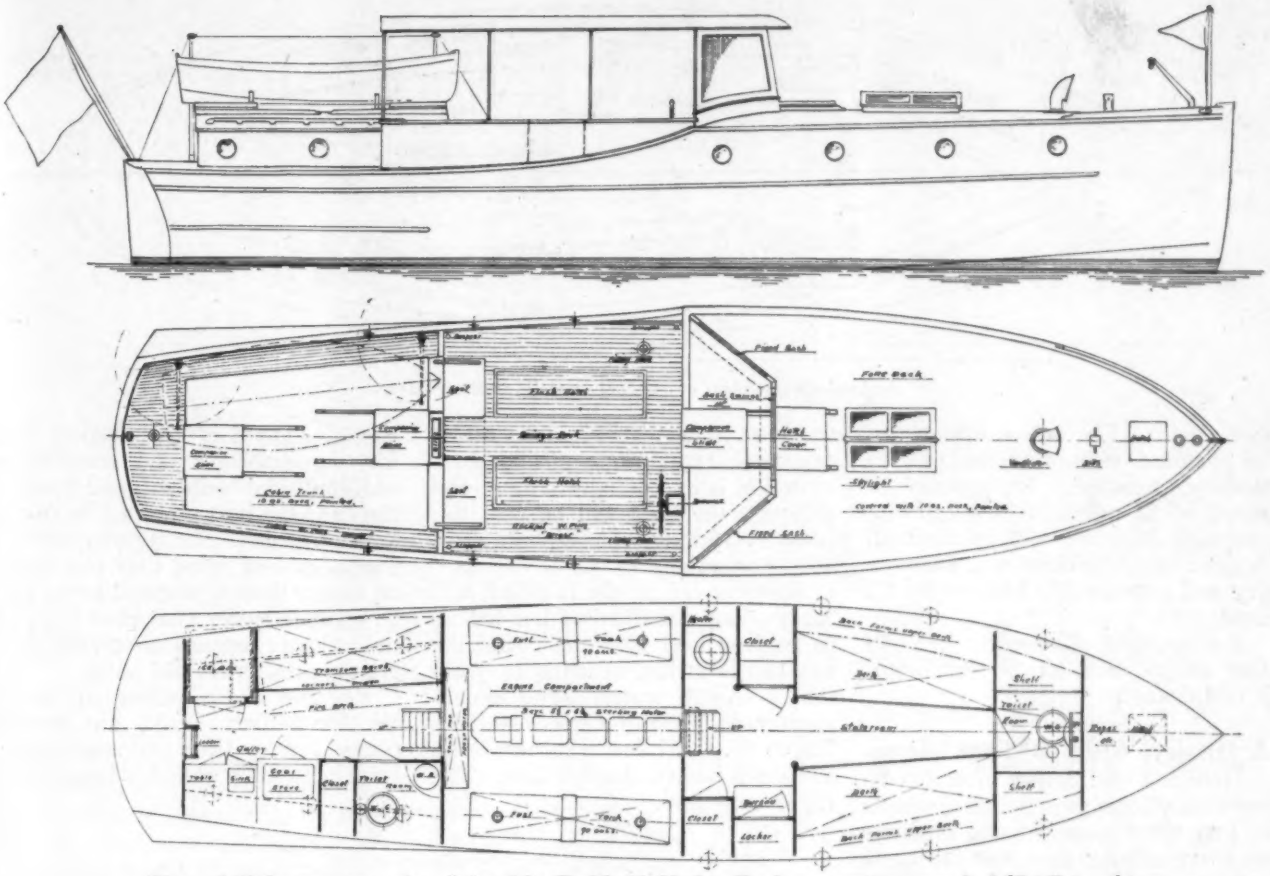
The new boat is 45 feet long over all, 35 feet on the water line, 11 feet 10 inches beam, and 6 feet 6 inches draught. She is a true fisherman model, with moderate overhangs, good sheer and sections that will insure the boat's sailing at a small angle of heel. At the same time she can be driven easily with a moderate sail plan, the total area of the three lower sails being 1127 square feet. The deck house is not too wide, there being 2 feet of deck room on either side between it and the rail. Below decks she has a very unusual arrangement which includes a large main cabin with four transom berths, each 2 feet 3 inches wide, with lockers and stowage space back of them. Forward of this cabin is a stateroom with a berth and a full length transom, thus giving sleeping accommodations for six. On the starboard side is a galley of unusually large dimensions, it being 8 feet 6 inches in length with plenty of room for the ice-box, stove and dressers. In the foc's'le are two large lockers, a pipe berth, pump and a toilet.

The layout is one which will bear close study for those desiring the maximum accommodations in a cruising boat. The engine is installed partly under a bridge deck at the after end of the cabin house and partly under the companion steps.

The amount of room in this boat



Accommodation plans and sections of 45-foot cruising schooner designed by John G. Alden.



Plans of 39-foot express cruiser designed by R. M. Haddock. She has a maximum speed of 27 miles an hour.

over the *Malabar,* which was 41 feet long as against 45 for this boat, is unusual, and while the little vessel is no harder to handle, she will sleep six aft and one forward in comfort. She has a single head-rig, the jib sheet working on a traveler so that she is particularly easy to handle. While this one sail is more efficient, we would prefer a double head rig, however, if the boat were to be used off shore. The main boom is only 27 feet 6 inches in length and the whole rig is very compact. She also carries a main-top mast staysail for use off the wind or in light weather. The boat will be ready this Spring.

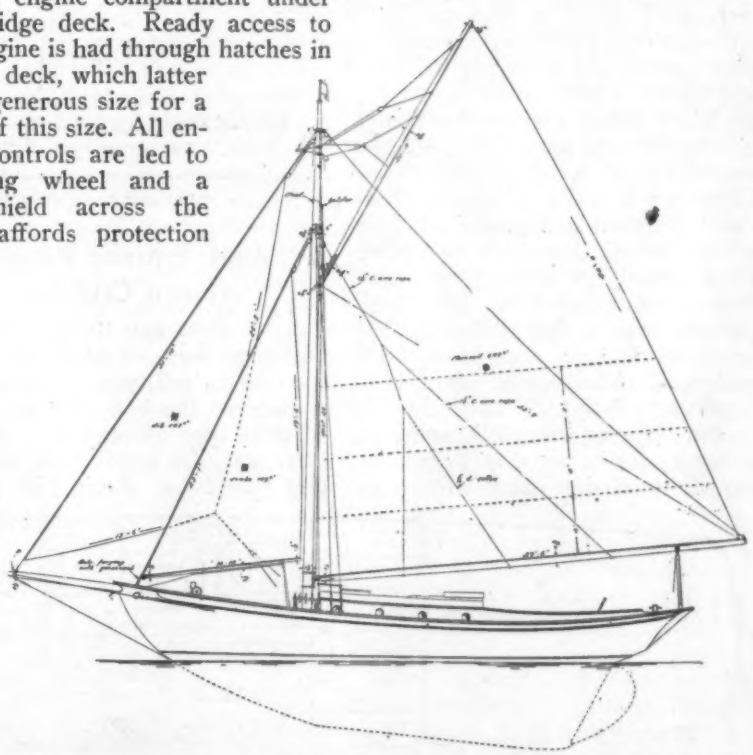
A 39-Foot Express Cruiser

Here is a snappy little 39-foot express cruiser being built to meet requirements of her owner, Carlton H. Palmer, from plans prepared by R. M. Haddock. She is of the V-bottom type with motor, an 8-cylinder Sterling of 200 H. P., installed under the bridge deck. She is a well proportioned little craft, as are all of Mr. Haddock's boats, of unusually pleasing appearance.

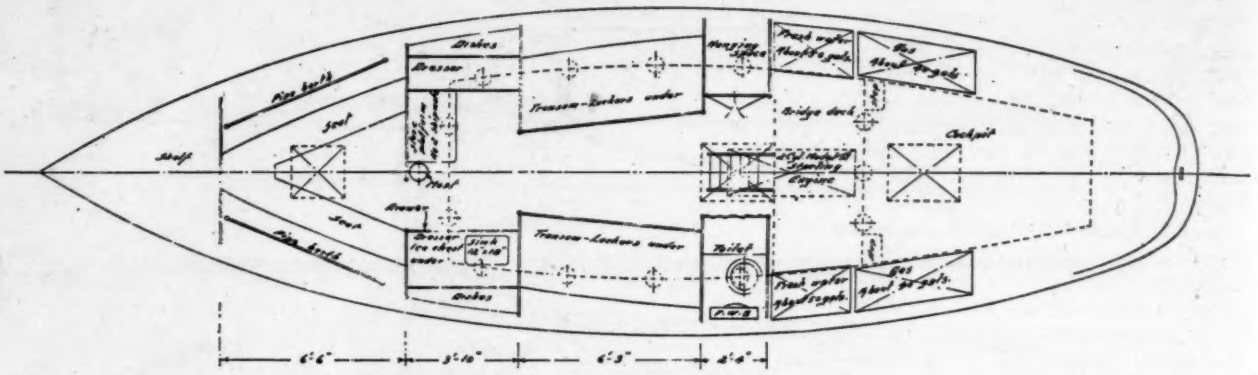
The forward cabin is for the owner's use and the backs of the transoms are arranged to swing up, forming two extra berths. As the boat will be used for hunting trips in the late autumn space for a coal burning heating stove has been provided in owner's quarters. Two good sized clothes closets and a bureau, as well as a completely appointed toilet room, are included.

Fuel and water tanks are located in the engine compartment under the bridge deck. Ready access to the engine is had through hatches in bridge deck, which latter is of generous size for a boat of this size. All engine controls are led to steering wheel and a windshield across the boat affords protection in all weather. The after cabin contains the galley with Shipmate stove, a transom and a pipe berth for two persons, a large ice box, a closet for clothes, and a toilet room.

The hull is of mahogany, finished bright, with white pine bridge and



Sail plan of 40-foot overall auxiliary cruising sloop, designed by W. H. Hand, Jr.



Accommodation plan of 40-foot overall auxiliary sloop.

side decks. The entire bridge can be enclosed with side curtains in stormy weather. A maximum speed of 27 miles, with a cruising speed of 24 miles, will be attained. A generous freeboard will insure a dry and comfortable boat under all conditions.

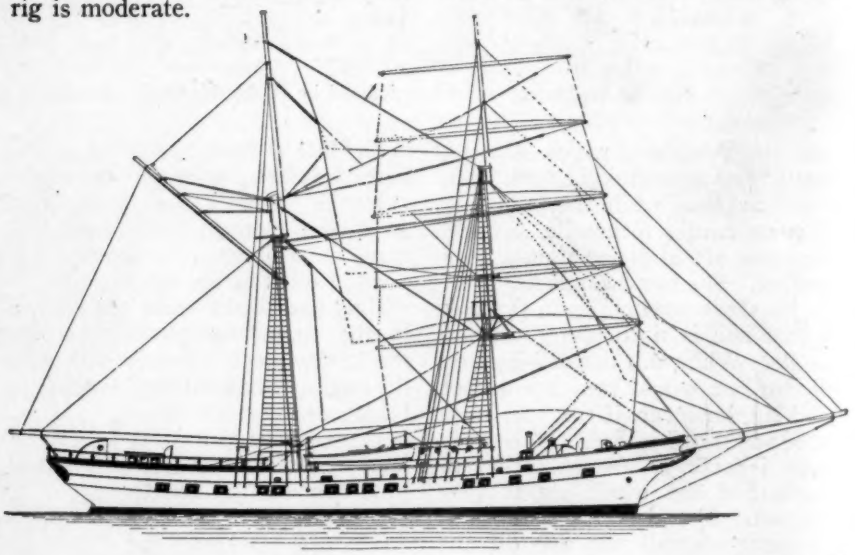
Her general dimensions are 39 feet length over all, 9 feet beam, 3 feet draught.

A Husky, Able 40-foot Sloop

Here is a real, husky little auxiliary sloop, fit to go anywhere, which is just what some of the cruising men are after. She was designed by Wm. H. Hand, Jr., of New Bedford, Mass., for Mr. C. D. Alexander of Portland, Maine, and is now being built by F. F. Pendleton, of Wiscasset. She is a most attractive cruiser and is of a type which combines comfort and roominess with safety on open water.

The design is typical of Mr. Hand's recent work in auxiliary craft and shows a splendid little ship with excellent accommodations, good speed, and a degree of seaworthiness which make a strong appeal to those who are interested in boats which may come and go regardless of weather conditions. The sheer is sharp with good freeboard forward and plenty of flare to the forward sections to insure a dry boat. The arrangement provides accommodations for four persons, with a fine galley and all necessary lockers and toilet conveniences. The power plant is a 2-cylinder Model D 12-15 H. P. Sterling engine installed under a bridge at the forward end of cockpit. This power plant will drive the boat at about 7½ knots under favorable conditions. The construction is exceedingly strong, and although the boat will be well finished everything will be plain, neat, and serviceable.

Menikoe III, as she is called, will carry about one-third of her ballast in an iron keel, and the remaining two-thirds inside, insuring easy action in rough water. The dimensions are: Length O. A. 40 feet, length W. L. 31 feet 6 inches, beam 11 feet 5 inches, draft 6 feet. The rig is moderate.

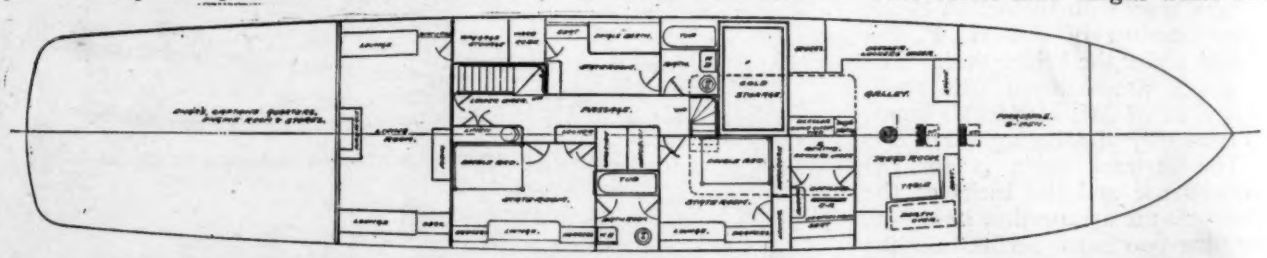


A Small Square Rigger for Ocean Cruising

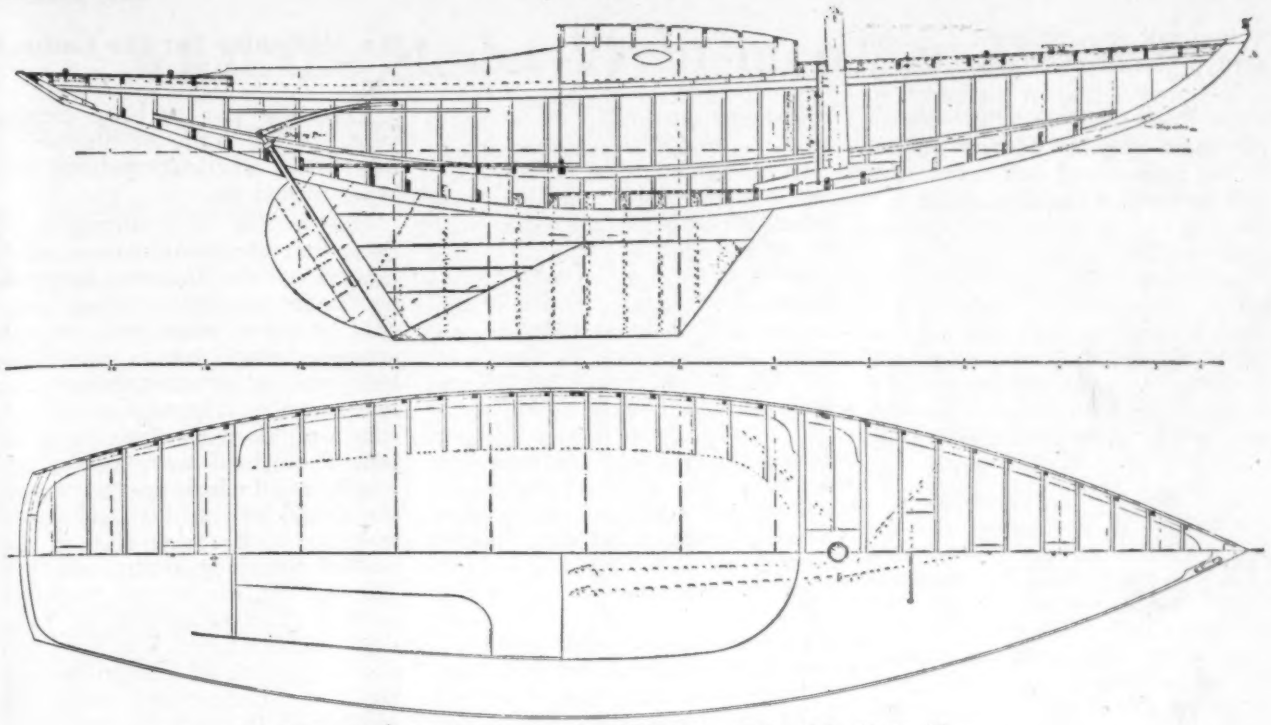
Some time ago the captain of a passenger liner, who had also served his time in sail, was asked what he considered the best and most comfortable type of sea-boat. His answer was, "A handy bark of about 600 tons," i.e. about 150 feet in length. There is no question that for seaworthiness and comfort a well-built and well-designed square-rigger is the best type that has ever been produced. For running off before a gale of wind they can carry on longer than a fore-and-after, can be handled easier and when hove-to under lower topsails or staysail they are as easy as an old shoe.

Keeping these points in mind, W. H. Millett, N.A., has drawn plans for a little hermaphrodite brig, commonly called a brigantine, designed for off-shore cruising and fitted with a moderate sized Diesel engine for auxiliary power. The brigantine rig has always been popular in small vessels and 40 or 50 years ago most of our West India and South American trade was carried on in vessels of this rig.

The general dimensions of this little vessel are: length water line



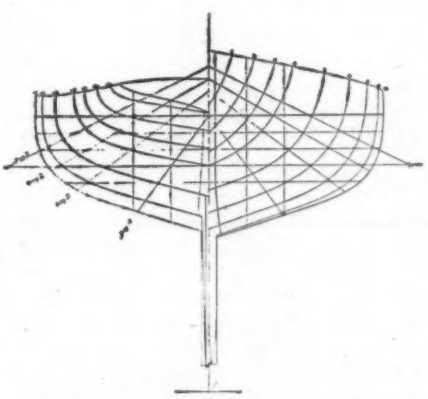
Sail and accommodation plan of 100-foot waterline, off-shore cruiser with brigantine rig. Designed by W. H. Millett.



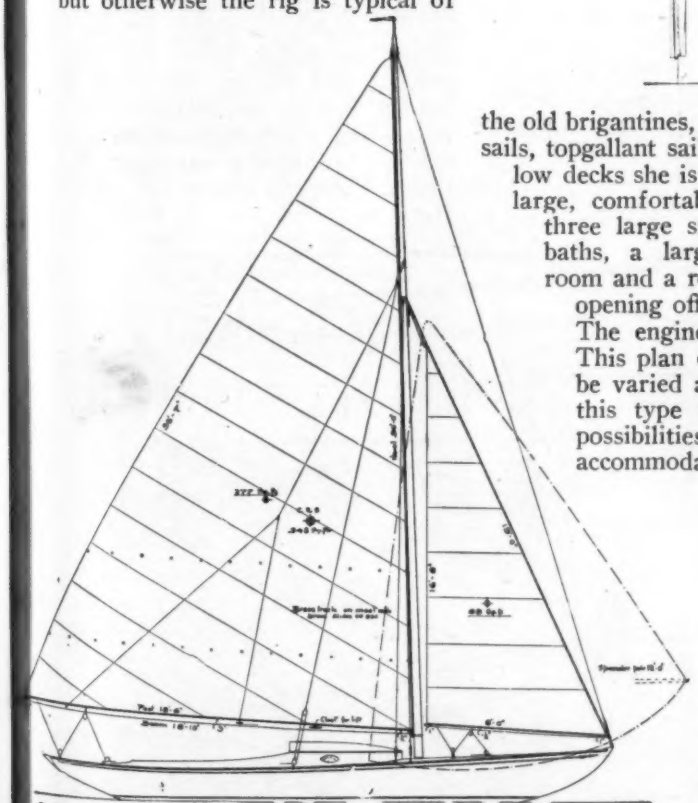
Construction and body plans of class "S" sloop. Designed by C. D. Mower.

100 feet, length overall 120 feet, beam 22 feet 6 inches, and draft 11 feet 6 inches. In profile she is very much like the merchant brigs, with a clipper bow and a typical counter stern. There is a quarter deck aft, flush with the top of the bulwarks, so that the sheer line is not broken except for the taffrail aft.

Her bowsprit is a single stick, which follows the modern practice, but otherwise the rig is typical of



the old brigantines, with double topsails, topgallant sail and royal. Below decks she is provided with a large, comfortable living room, three large state rooms, two baths, a large cold storage room and a room for officers, opening off the mess room. The engine is located aft. This plan could, of course, be varied as in a vessel of this type there are many possibilities in the way of accommodation.



Sail plan of Marconi-rigged class "S" boat for Bay City, Michigan. Designed by C. D. Mower.

Class S Boat for Lake Huron

The S class has become very popular in the last two or three years both for racing and day-sailing, and at Marblehead and on Long Island Sound a great many of these boats are being sailed.

A little boat that measures into this class was designed by C. D. Mower last year for the Bay City Yacht Club of Bay City, Mich., where a number of boats were built for a one-design class and have proven very successful.

Mr. W. F. Jennison of Bay City, the owner of one of these boats, writes as follows concerning them: "I know you will be glad to know these little boats have been wonderfully successful, and I think I am right when I say there never was a better boat designed for amateur sailors. We have found them to be non-capsizable, very sturdy and weatherly, and carry their canvas well in a strong breeze.

"In a race from North Island to Bay City, which took place this summer, a distance of 35 miles, there was only one minute and a half between the first three boats. They have been the making of the Yacht Club in that they interested about thirty young fellows, most of whom are new members and the majority of whom never sailed before."

She is a fine little boat, as the plans show, her dimensions being: length over all 26 feet, length water line 18 feet, beam 7 feet, draft

4 feet, sail area, mainsail 277 feet, area of jib 68 feet, total 345 feet.

We predict that in the next few years classes "S" and "R" will be the most popular of any of our racing classes, and that many boats will be built to them.

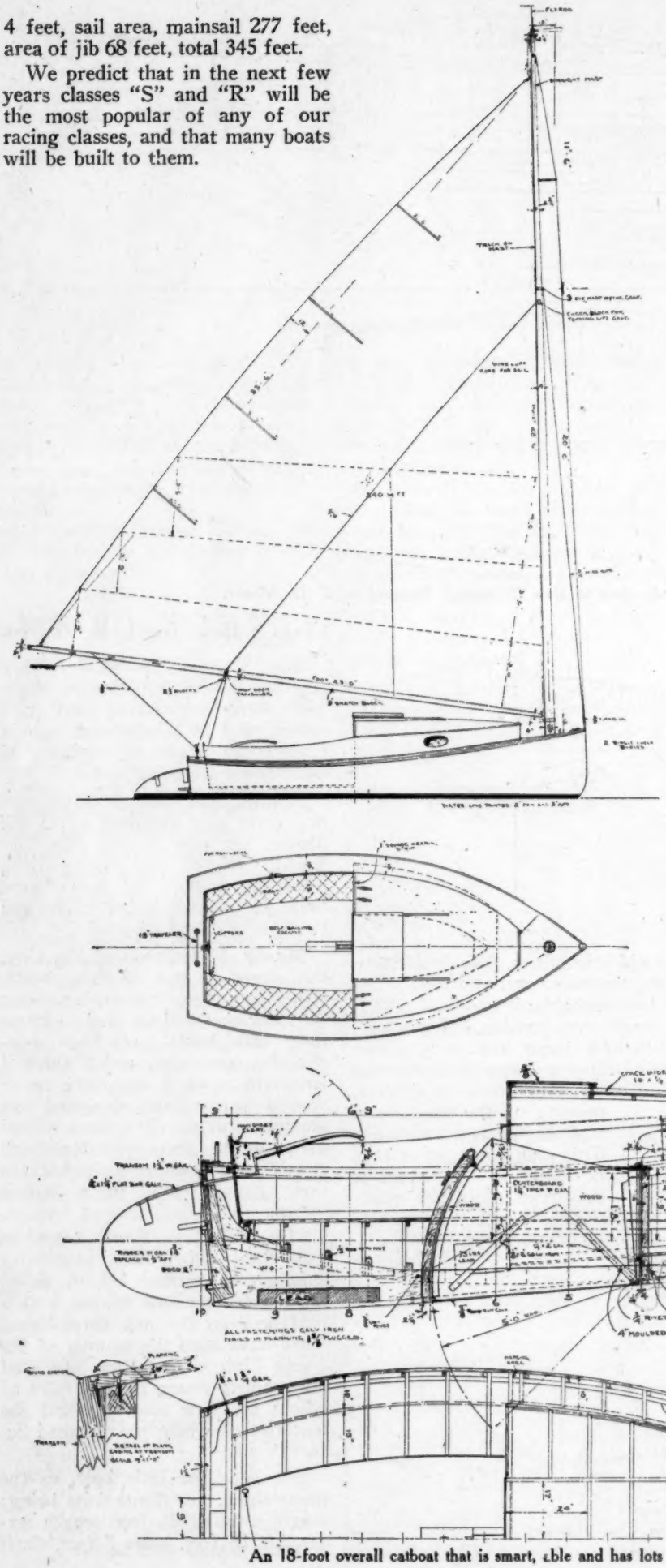
An 18-Footer for the Catboat Sailors

This bids fair to be a catboat year, judging from the number of little boats of this type that are being turned out.

One of the most attractive of these that has come to our attention, is a little 18-footer designed by E. De Levante of New York, only 18 feet in length and yet with enough room in her to give excellent cruising accommodations for two persons. The boat has plumb stem and stern so that she is all boat, throughout every inch of her length, and the lines are easy so that she should be very fast and should make an ideal racing class if one wanted them for racing. With a Marconi rig, she is very much up-to-date. Her beam is 8 ft. 4 in., draft without board 1 ft. 8 in., and she has a hunk of lead on her keel abaft the centerboard trunk and another 75 lb. piece in her centerboard.

Construction details have been very carefully worked out, as have the cockpit and cabin layout, while she is very well proportioned and is handsome above and below the water line. There are two wide transoms on either side of the cabin with a drop leaf table on the centerboard trunk, and there is 4-foot head room under the carlins.

A boat of this kind can be turned out for a very moderate sum and as a boat for cruising, or for a small one-design class for both cruising and racing, she would be hard to beat as the beam of a catboat gives much more room than can be had in the narrower keel sloops. The sail area is 340 square feet.



An 18-foot overall catboat that is smart, able and has lots of room in her.

What the Model Yachtsmen Are Doing

How to Measure Model Yachts Under the New Rule

BY JOHN O. BERG, M. E.

IT may be that a yacht club or an individual wishes to acquire some simple means for measuring model yachts under the new rule, as it is quite likely that many existing models will be found which may be raced and would have an advantageous rating after minor changes were made, such as, for instance, cutting down the draught, which may in the older model be greater than permitted without penalty under the new Rating Rule.

Two methods of doing this are given here, with the necessary instruments, of which the tank equipment is the best. A member not building a model yacht for the coming International race (if such a one can be found) could make up either of them without difficulty for the use of his club.

In method No. 1 the measuring may be done anywhere, the model may be floated and the required points marked. In method No. 2 a measuring tank is essential.

In the first method a surface gauge is necessary, made up of a square block as a base into which a rod has been threaded, upon which rod is a sliding block which supports a needle held parallel with the bottom of the base block. A line should be drawn on the base block which represents the center of the needle held above.

The model is floated and the forward and after intersections of the water plane is marked on the model with a fine brush dipped into oil paint. The point of widest beam should also be marked. The model may then be removed and set up on a chalk line on the floor, representing the center line, so that the water line is parallel with the floor and the model stands plumb. In this position, by dropping plumb lines from the bow and from the stern water line marks, the distance between may be measured, also the W. L. beam width may be plumbed to the floor in the same manner and measured.

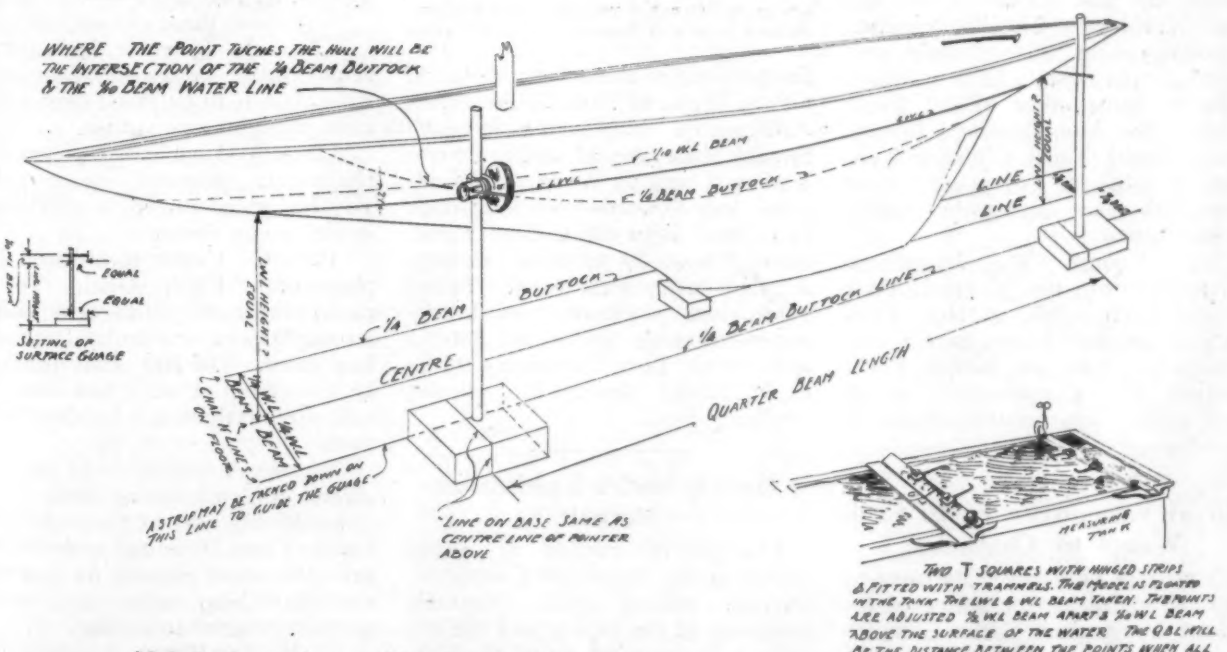
Having these dimensions snap a chalk line on the floor one-quarter the W. L. beam width to one side, and parallel with the center line. This will be a line representing a quarter beam buttock, and on it we may lay a straight edge either tacked to the floor or held there by weights. Along this line and straight edge, one edge of the square base of the gauge is guided until the point comes in contact with the hull above. This will be the intersection of the quarter beam buttock with the one-tenth beam water line if the gauge has been set so that the needle is at a heighth from the floor or under side of the base block, equal to the water plane height on the model as set up, plus one-tenth of the water line beam. The point of the needle or rod must, of course, be exactly plumb over the edge of the block in contact with the straight edge on the floor.

A point is made on the floor representing the position, fore and aft, of the needle above, and the same operation is performed at the stern. The distance between these points will be the quarter beam length. The other operations are mathematical and are the same as explained in the February issue for the finding of the Rating under the American Rating Rule.

Method No. 2 requires two T squares made up of ½" mahogany, each having a hinged piece along one edge. A piano hinge does very well for the purpose. The outside edge of the hinged strip should be marked in inches and tenths each way from a center line and at each end should be fitted with a strip of brass through which a set screw has been threaded. The instrument is complete after attaching a pair of trammels to each.

To use, first secure one instrument at one end of the tank containing the floating model. Then the water line length and the water line beam may be taken off in the usual way.

The instruments are then set with the trammel points each one-quarter of the water line beam dimension from the center line of the hinged strip, and adjusted by means of the screw on the ends to one-tenth the water line beam above the surface of the water in the tank wherein


WHERE THE POINT TUCHES THE HULL WILL BE THE INTERSECTION OF THE ¼ BEAM BUTTOCK & THE 1/10 BEAM WATER LINE
EQUAL
EQUAL
SETTING OF SURFACE GUAGE
¼ BEAM
BUTTOCK
CENTRE
¼ BEAM BUTTOCK LINE
QUARTER BEAM LENGTH
LINE
LINE
A STRIP MAY BE TACKED DOWN ON THIS LINE TO GUIDE THE GUAGE
LINE ON BASE SAME AS CENTRE LINE OF POINTER ABOVE
TWO T SQUARES WITH HINGED STRIPS & FITTED WITH TRAMMELS. THE MODEL IS FLOATED IN THE TANK. THE LWL & WL BEAM TAKEN. THE POINTS ARE ADJUSTED 1/10 WL BEAM APART & 1/10 WL BEAM ABOVE THE SURFACE OF THE WATER. THE QBL WILL BE THE DISTANCE BETWEEN THE POINTS WHEN ALL ARE IN CONTACT WITH THE HULL

Methods of measuring a model yacht under the rating rule.

the model is floating. The model is then pushed backwards until the hull is in contact with the trammel points of the stationary instrument and the center line of the model corresponds with the center line on the instrument. Then the sliding instrument is brought to the model until the trammel points thereon make contact with the hull. The model may then be removed and the distance between the trammel points measured, which will give the quarter beam length.

On the instruments which the writer is making for the Central Park Model Yacht Club a sight similar to a gun sight is placed on the center line of each instrument so that an assistant may guide the model more easily while the operation is in progress.

Irvington Model Y. C. Annual Meeting

The Annual Meeting and Dinner of the Irvington Model Yacht Club, of Irvington, N. J., was held on January 11th, at the Elk's Clubhouse in Irvington.

The following members were elected officers for 1922: Commodore, Edward K. Southwick; Vice-Commodore, Ira A. Gibson; Treasurer, Charles W. Pfeil; Secretary, Theodore Woolman.

The outlook for the 1922 season is very bright, particularly regarding the numerous local and interclub races for Class D sloops to take place during the coming regatta season.

The Cups were presented to the owners of the Model Yachts which secured the most number of points during the past season's races, and the "Irvington Class" Perpetual Challenge Cup was officially presented to the Club to keep until it is won by some other Model Yacht Club. The Montclair and Central Park Model Yacht Clubs will endeavor to lift the Cup in a series of inter-club races during the coming sailing season.

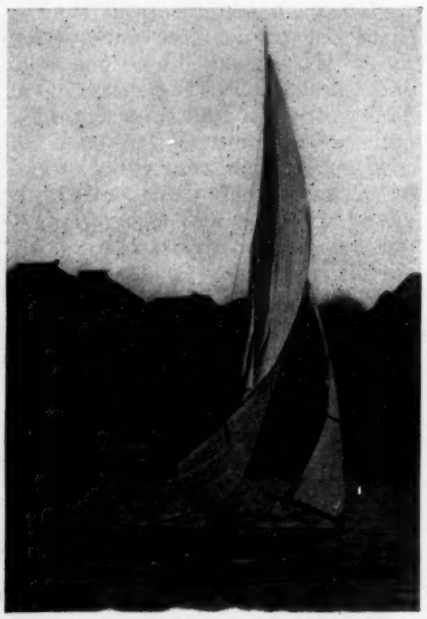
Mr. George W. Magalhaes, Treasurer of the Central Park Model Yacht Club, of New York City, as guest of honor, gave a very interesting talk on Model Yacht Design and Construction, which was greatly appreciated by all the members present.

Royal Vancouver Yacht Club Wants to Challenge

Mr. John Winslow, Chairman of the Model Yacht Committee of the Royal Vancouver Yacht Club informs us that all of the yacht clubs in his vicinity have adopted the new American Model Rating Rule as their standard for classification for model yachts and he is anxious to know whether a contender from Canada would be acceptable as an additional entry for the International race. The matter will be referred to Mr. Daniels and the Model Yacht Racing Association of America and it looks as though the test might be broadened, thus extending the interest in this first international model yacht race.

The First of the B Class Model Yachts

The first boat built for the International Race and tried out under sail is the *Owisquat*, designed and built by John O. Berg. Here are



Owisquat, first model yacht built for the International races next Summer to take the water.

the particulars about her: L. O. A. 69", L. W. L. 45", Dis. 35 lbs., S. A. 2,900 sq. in. Has been sailed each Sunday since Dec. 31, 1921. Course 3 miles in light S. W. wind. Windward and leeward from long dock to channel light off College Point. Time 1 hour 39 minutes. Course, 3 miles, heavy west wind. Triangular, long dock—end of breakwater—steamer docks at Astoria and return. Time 58 minutes. Over C. P. Model Yacht Club, course, Flushing Bay.

Model Yacht Exhibit at Detroit

The recent exhibit of model yachts at the Board of Commerce, Detroit, caused much favorable comment in the papers and the exhibit was crowded from the time it opened until late at night, showing the interest in these boats that is being aroused. The Detroit Model Yacht Club, which got up the exhibit, is the youngest member of the Yacht Racing Association of America and it is understood that they will have an entry for the coming International races to be sailed this June.

A Hail to Power Boatmen

Mr. Harry Johnson, Vice-Commodore of the Central Park Model Yacht Club, has an interesting proposal on classification for Model Power Yachts. He writes as follows:

"The recently formed Model Yacht Racing Association has put model yachting on a sound footing. It is acting like a tonic and we can hope for a large fleet of models built to standardized rules for the coming season. Of still greater value than the International match will be the interclub races which are bound to come along. So far so good—for sailing yachts. But how about power boats?

"Now, if anything ever needed help it is model power boating. It is in a worse fix than yacht sailing ever was, for most of the yacht had knowledge of the old rules, whereas no one ever heard of any power boat rules. Power boat racing would undoubtedly receive an impetus if a practical set of rules were evolved and adopted by the Model Yacht Racing Association. Interclub races would follow in its wake and even the picking of a national champion would be an easy matter. As somebody has to start something, here goes——

"I propose three classes, viz.:

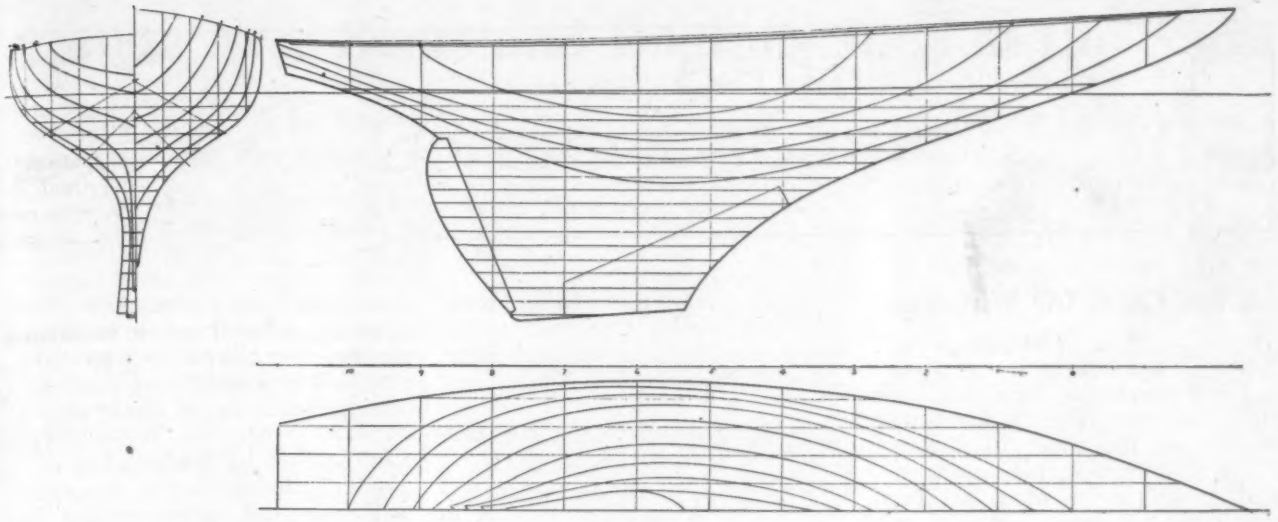
"Class A—½ cubic inch piston displacement, saturated steam only. This class is to be raced over a 50-yard straightaway course.

"Class B—1 cubic inch piston displacement, saturated steam only. To be raced over a 100-yard straightaway course.

"Class C—1 cubic inch piston displacement. Flash steam. To be raced over a 300-yard course, either a straightaway or circular (tethered to a pole). The 300 yards need not be traversed at once but may be split up into three one hundred yard runs.

"Classes A and B would be ideal classes for club racing while Class C would take care of the high speed bugs. Class B would undoubtedly prove the most popular, in fact two clubs have been racing for a season to rules somewhat similar.

"HARRY JOHNSON."



Lines of 26-inch water-line model yacht, designed to the rating rule by E. I. Schock. Her over all length is 34¼ inches and her displacement 10¾ lbs.

Model Boat Department

Feeling that the model yacht department of YACHTING has grown to such proportions as to require the services of a special editor, we are glad to announce that we have secured Mr. John O. Berg, a well-known amateur model yacht designer, builder and sailer, to conduct this department. With his wide experience, we feel that this will be of advantage to all model yachtsmen.—EDITOR.

✡ ✡ ✡

Now that the skipper has put me at it to look over the mizzen rigging of the good ship YACHTING, I would like to call to the attention of all model yacht clubs and individual model yachtsmen the great advantage of cooperation. It is not so many years ago that model yachting was in the doldrums and had all the appearance of becoming a total loss. There was no reason apparent for this stagnation in the sport except, perhaps, that everyone who sailed at all built any old size of boat so that interclub racing was carried on very rarely and then only for such trophies as the Eagle Cup.

✡ ✡ ✡

Perhaps at the time of the lowest ebb in the sport an organization was created which proposed as a "keel timber" the assembly and distribution of such information as it could gather from a class of model yachts built under specific dimensions limiting the load, water line length, sail area and draught. We are not ready to state that this resolution had all to do with the successful assembly of the Frame as it stands today, but those who have followed the sport since that time cannot fail to agree with the statement that at no time has the sport been so active throughout our U. S. A. as it is today.

✡ ✡ ✡

A class for instruction in naval architecture was organized for the members of the Central Park Model Yacht Club, to which two members of any other model yacht club wishing to send them, were invited. The charge for all was the same and nominal. The only condition made was that the visiting model yachtsmen organize classes in their own clubs to spread the good work. The Model Yacht Racing Association of America is the latest advancing step.

✡ ✡ ✡

What I want to point out is the value of distribution of facts, and the policy of these columns will be to broadcast as much as the space will permit what is of interest to model yachtsmen. The International race should assure the permanent advance of the sport. Boats for this race are building all over the country and plans are being formulated which will give a boat from any locality the chance to prove itself the best—and nothing short of the best will do. I am prophesying that the Association Committee is going to have one busy time of it.

✡ ✡ ✡

There is much to be learned from the racing which is going to take place. The club which assembles data of value will gain thereby and help the sport by passing it on to others.

✡ ✡ ✡

The interest shown at the Motor Boat Show at New York in model yachts was a pleasant surprise. The *Onisquat*, a description and illustration of her being given elsewhere in this issue, was the magnet which attracted many to the YACHTING booth, so also to the one showing the fleet of models made by students of the New York Manual Training Schools of New York.

Altogether the future looks bright for the sport, and it will be our aim to give the best that can be had to further the sport and to answer all requests for information on the subject.

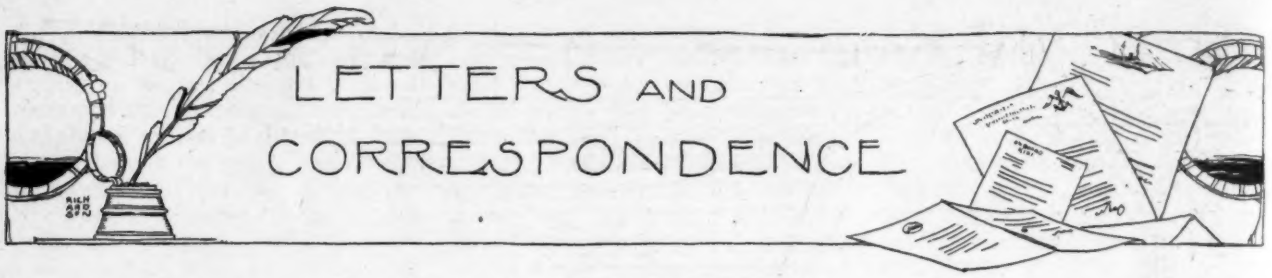
JOHN O. BERG, M. E.

A 26-Inch Waterline Model Yacht

The plans which we publish here are of a 26-inch waterline model yacht designed to the new model rating rule of the Model Yacht Racing Association of America by E. I. Schock. They show a well-balanced craft with good displacement, plenty of lateral plane, without too long a keel, and a Marconi rig.

The ends are somewhat shorter than is customary with models of the past, particularly the stern, which is cut off short 2¾ inches beyond the waterline. This practice is being followed by some naval architects in large boats, where the saving of weight is of great importance. That reason would hardly hold in the case of a model, however, and we believe the after overhang could be carried out a little farther and improve the appearance of the stern.

Her dimensions are: Length overall, 34¼ inches; waterline, 26 inches; beam, 9¼ inches; draught, 8¼ inches; displacement, 10¾ pounds.



A Sea Chest for Winnipeg

Winnipeg, Can.

Editor, YACHTING:

I was wandering through a book store one day recently when that picture on the cover of January YACHTING struck me amidships, and I discovered what has been ailing me for years. Would you mind sending me the February number post haste, and also let me know what your yearly subscription is for this anchorage (you will notice it's north of 49°). I must get in on this 1922 cruise.

From the map you no doubt would think that Winnipeg is in the middle of the prairie, and you would be right; but Lake Winnipeg is not very far away. There are a number of Summer resorts along its shores and a few harbors for rough weather, and I am going to contrive to have the *Sea Chest* sailing those waters this next Summer if it's the last thing I do on this earth. Hence my anxiety to get that February number right away.

I was much interested in the cruise of the *Neith*, and if you have the back numbers containing the first three parts would you please mail them to me with a bill. I would be extremely glad to get them.

The next time you see Mr. Dwight S. Simpson (designer of *Sea Chest*) buy him an expensive cigar for *me* and add it to my subscription.

R. W. WYDEMAN.

Draft Limitation in Model Rule About Right

Union Hill, N. J.

Editor, YACHTING:

Regarding the discussion and comment which has been waging about the 32 per cent draught limitation of the American Model Rating Rule, instead of the 16 per cent of the Universal Rule, I note that the plans of the one-design 15-footers for Narragansett Bay in January YACHTING show a draught proportion equal to 30 per cent of the L. W. L., whereas if measured under the Universal Rule the maximum allowed would be 27 per cent only.

Experiments now being made with my model *Owisquat*, an aspirant for the International Race, show for models that 32 per cent + 1.56 will be found to be very close to the minimum, if good windward work is to be expected. I may state that on January 15 I sailed over a three-mile course in a heavy wind in the morning and another like trial in the afternoon, in lighter weather. It was distinctly evident that in the heavier puffs the model made considerable leeway when going to windward with board up, whereas with board down she stuck to her job. I am about satisfied that the deep fin without board for heavy weather and the shallower one with board for light weather only, is the proper caper.

JOHN O. BERG.

Early History of New York Canoe Club

Editor, YACHTING:

Seeing in one of the recent issues of YACHTING an account of the 50th Anniversary of the N. Y. C. C., I thought that perhaps the following account of the early history of that organization might be of interest to your readers.

The first half-dozen years of the club were devoted to that cruising which is the true function of the canoe, many cruises being made up the Hudson and by way of Lake Champlain to Canada, one such cruise producing the book *"Canoeing in Kanukia,"* written by Colonel Norton and John Habberton. For several years, as the club had no house of its own, the canoes were stored at different boathouses about the city and on Staten Island, and the organization was very much of a family affair, enjoying its little dinners at Hickman's and, later, at the old Café Hungaria, then a haven of rest on Union Square East, just above 14th Street.

The real boom in canoeing in America came in 1880 with the organization of the American Canoe Association at Lake George. The New York Canoe Club took an important part in its formation. Six years later the club, under the leadership of Commodore Kirk Munroe, offered an international trophy, open alike to foreign canoeists and to members of all American canoe clubs. A challenge was received from the Royal Canoe Club with E. B. Tredwen and Warrington Baden-Powell as representatives, the former with a specially designed Pearl canoe and the latter with the latest model of Nautilus. Owing to the illness of Mr. Tredwen's father, his place was taken by Walter Stewart, who sailed *Pearl* at New York, in company with *Nautilus*, against Mr. Vaux in *Lassie* and Mr. Whitlock in *Guenn* for the New York Canoe Club, the latter team winning.

The construction of the railroad on the North Shore of Staten Island, in 1885, compelled a move by the club, a scow was purchased and the shore house was rebuilt on it, being anchored for a time off St. George, as the old location was newly named, and later moved to a more sheltered mooring off Stapleton.

After various vicissitudes, including the wrecking of the house in the gale of 1893 and similar mishaps, a permanent location was secured on Harway Ave., Bensonhurst, on Gravesend Bay, by leasing an old residence and placing the house on piles. Here the club rested for many years, the one change, apart from the personnel as the older members retired and new ones took their places, being the decline of the interest in the decked sailing canoe, which has affected the sport in all parts of the country.

As a natural result, the interest of the members was largely transferred to various classes of small sailing craft and decked yachts, the club for some years past taking a prominent place in the racing under the auspices of the Yacht Racing Association of Gravesend Bay.

The organization stayed on the lower bay until the inroads of commerce forced it once more to weigh anchor and seek another harbor. This was found at Little Bay, Fort Totten, Long Island. The club moved to its new home last summer and has found it ideal for its purposes.

H. S. L.

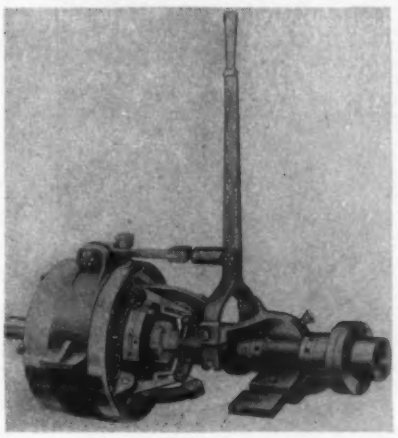
Some New Boats and Engines Seen at the Show

Sterling Models to be Known by Name Hereafter

The Sterling Engine Company have made a move which will be appreciated by any one buying an engine, when they decided recently to name their engines hereafter instead of giving them combinations of letters that were hard to remember, such as Models GM, GH or GR, as they simply meant nothing to them.

The previous Model GRS and GR series of engines will be known as the Sterling Dolphin model. These are the engines that have twice won the Fisher Trophy, finishing both first and second. The symbol is indicative of playful sport. The medium speed models of the same type will be known as the Sterling Trident either Slow Speed or Medium Speed, to designate between the engines rated 200 to 800, and those rated 300 to 1,200 revolutions. The Trident is Neptune's authoritative sceptre.

Of the two Models that are appearing in 1922, one will be designated as the Viking, for the 7" bore by 8½" stroke engine rated 300 H.P. at 1,200 revolutions. This is an overhead valve engine operated by overhead camshafts with some differences in construction from the usual type. Instead of employing single cylinders the cylinders are arranged in a long water jacket with removable cylinder sleeves. The latest features of construction have been worked out in this machine. The name Viking is obtained from the helmet, which is part of the Sterling Coat of Arms, indicating the fearless and courageous pioneer who always arrived first.



The new Paragon special racing type reverse gear.

The other new model will be called the Sterling Sea Gull. The three Sea Gulls on the Sterling Coat of Arms are emblematic of speed, and this is a high speed and medium speed engine, designed especially to contend for the Gold Cup Races.

This engine has the same characteristics as the Viking model, but has single overhead valves operated by a single camshaft instead of the dual valves. These engines were exhibited at the New York Show, where they proved a great attraction to motor boat owners.

A New Paragon Gear

The Paragon Gear Works of Taunton, Mass., have recently brought out a new reverse gear that will make a big hit with the owners of high speed or racing boats, as it is designed as a special racing type of gear.

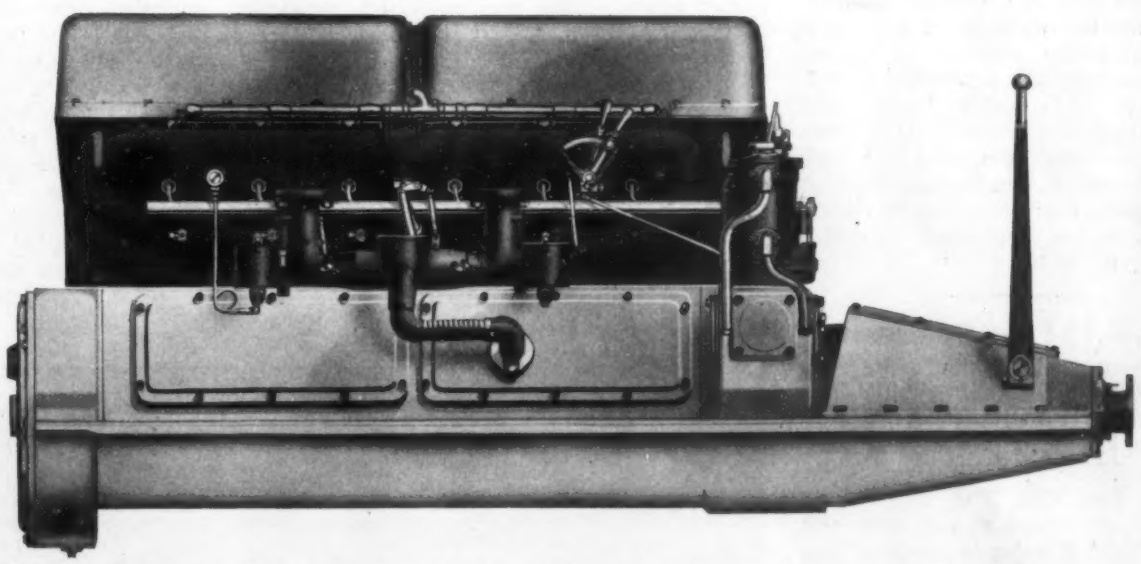
Owners of hydroplanes and other light racing craft, who have installed these 100 H.P. converted Hall-Scott Motors have learned—often by costly experience—that the average reverse gear cannot be expected to stand up satisfactorily under this strain. The use of the Racing Model of the well-known Paragon is solving their transmission difficulties—and doing it economically.

Designed especially for racing, this new Paragon model is the result of a thorough investigation and appreciation of the transmission demands of these high speed, converted aviation motors.

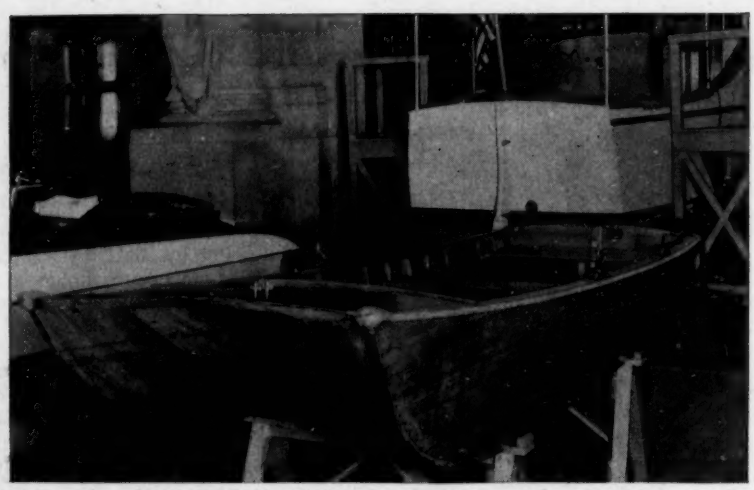
This gear has been specially designed for the 100 H.P. Hall Scott engine and is priced at $115.00, complete with rear bearing.

The model B speed gear has been used successfully on high speed motors rated up to 200 H.P. For motors rated at 200 to 400 H.P. the next larger size, model C speed, Unit Model, is recommended.

With the reputation of the Paragon Gear Works for turning out high grade gears, there is no doubt of the ability of this new gear for the work intended.



The new Sterling, six-cylinder over-head-valve engine, which was exhibited for the first time at the New York Motor Boat Show.



The new Sea Sled yacht tender, seen for the first time at the motor boat show. She is 11 feet long, weighs 140 lbs., and will carry 1,500 lbs. She will tow at high speed or can be used with an outboard motor.

New Palmer Engine Models

Some other new models that were seen at the show, and that attracted a great deal of attention, were two additions to the Palmer line which were radically different from anything that this Company has put out before.

One of these, was a model VH, four cylinder, valve-in-the-head motor, rated at 14 H.P. at 1000 revolutions and designed for pleasure boat use, either in fast cruisers, runabouts or any type of boat that is not too heavy for the power. It is an exceedingly neat looking engine, the cylinders being cast *en bloc,* the overhead valves and cam shaft being covered with an aluminum case. The engine is completely equipped with starter, generator, battery and high tension magneto. It was one of the most refined engines seen at the show.

Another model that attracted a lot of attention was a little single cylinder two H.P., four cycle, valve-in-the-head motor, designed for use in a yacht tender, rowboat or hunting skiff, as auxiliary power for a small sail boat. The bore is 3 inches and the stroke 3½ inches. The whole outfit is very light, and for high grade work it can be had with an aluminum base, the weight of the whole engine, including fly-wheel, being only 85 lbs.

Two 18-Foot Runabouts

Among the boats that made a big appeal to the crowd at the show were two 18-foot high speed runabouts, known as the Jersey Flyers, and exhibited by the New Jersey Motor Boat Co. They were of V-bottom construction, powered with a 15-20 H.P. valve-in-the-head racing type motor, which gives a guaranteed speed of 23 miles per hour. The builders say that they have exceeded this speed by many miles, so that they are playing it very safe in only guaranteeing twenty-three. A feature that was appreciated by those who know was the extreme accessability of the motor. It is placed forward of the cockpit, under hinged hatches, with room to get around on either side.

The cockpit arrangement shows two 'thwartship seats, seating six passengers, the control being from the forward seat. The boats are finished in full mahogany, the construction being of the batten seam type with Port Oford cedar planking over oak frames. At the price at which these boats are being put out as a standardized stock job, they were the hit of the show.

The Sea Sled Yacht Tender

Another little boat that caught the crowd during the recent show was a small 11-foot Sea Sled "Dink" or power tender, made and exhibited by the Sea Sled Company of West Mystic, Connecticut.

Built exactly on the lines of the famous Sea Sled, this boat is ideal for towing behind a power boat at high speed, as the faster she is towed the better she planes, instead of squatting on her stern and sticking her nose in the air, as does the ordinary type of boat. She also has the unusual carrying capacity of 1,500 lbs., and nine persons have actually been carried in her. She is practically non-capsizable, which is a great advantage in boarding or leaving her at a club float, or in landing on a beach. She only weighs 140 lbs., and with an outboard motor hung over her stern excellent speed can be made if she is used as a power tender. George Crouch, the designer of the Sea Sled Company, insists that this little boat, rigged with a spritsail, can go to windward without a centerboard.

The same company also exhibited a 24-foot standardized Sea Sled, with a 40 H.P. motor turning twin screws through a Sea Sled transmission gear, which has a speed up to 24 or 25 miles.

They also exhibited the 30-footer *Marathon,* a high speed type of Sea Sled owned by Henry B. Plant of New London, and powered with two six-cylinder Hall-Scott motors which give her a maximum speed of between 46 and 47 miles per hour.

An 18-Foot Gilbert Runabout

For knocking about, fishing and daily use on lakes, rivers or harbors, a little 18-foot mahogany runabout, exhibited by George I. Gilbert, was an exceptional boat for the money and was one of the biggest values at the show. Her beam is 4 feet, 8 inches, and while she is called a seven passenger boat there is ample room for ten people in her on three thwartship seats and one in the bow. She was powered with a 4 H. P. single cylinder Kermath engine with Bosch waterproof magneto and impulse starter, and with this outfit she is said to make ten miles an hour.

A feature of this boat is the steering gear and a device for lifting the propeller entirely clear of the bottom of the boat. The propeller shaft is hung on a universal joint and there is a slot in the stern of the boat to take this shaft when the propeller and shaft are raised by merely lifting the rudder post on which the rudder is hung. This allows the boat to be beached at any time, or she can be hauled up on shore without damage to the propeller. The price complete was only $580.00.

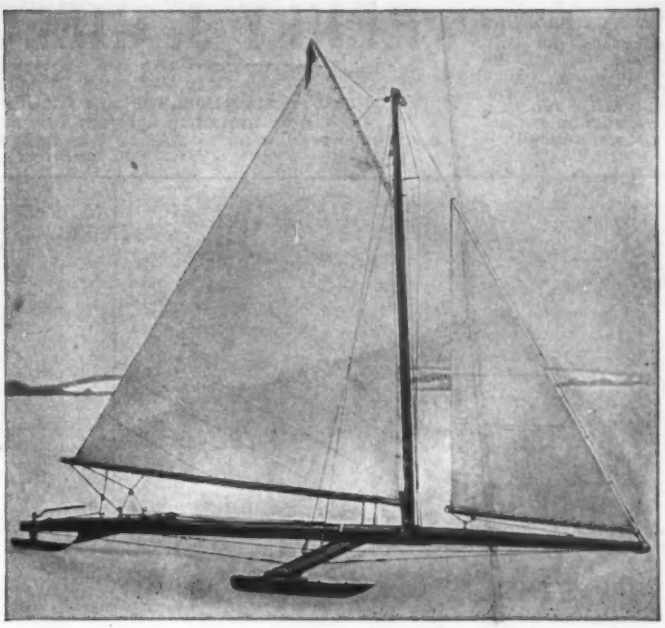
The New Jersey Flyer, 18 feet long, with a 15-20 H.P. motor, which gives a guaranteed speed of 23 miles per hour.

Evinrude Outboard Motors

The Evinrude Motor Company of Milwaukee, Wis. had an unusual exhibit of outboard motors and also of their inboard, single and two-cylinder motors, installed in canoes and rowboats. The new lightweight Evinrude weighs only 56 lbs., while the standard outboard, with magneto and automatic reverse, weighs only 72 lbs. in the 2 H. P. size. The weight of the 3½ H. P. is 115 lbs.

For inboard motors a one-cylinder 2 H. P. and a two-cylinder 4-5 H. P. were shown, these being ideal motors for installation in canoes, St. Lawrence skiffs, small fishing boats and the like.

The Evinrude 300 sq. ft. sail area ice-boat, which was exhibited by the company, was also a great attraction of the show. This was described in the last issue of YACHTING.



A 300 square foot Iceboat exhibited by the Evinrude Motor Co. The sails were made by George R. Burrows, Inc.

The Block Island Races

The Bay Side Yacht Club expects to hold the race around Block Island for auxiliaries this year and will schedule a date that will not conflict with any other of the long distance races. It is hoped that many more auxiliary owners will take advantage of the opportunity to get into a real long distance race and find out what they can do under both power and sail.

Last year the boats struck wind the whole way, so that it was hardly necessary to use the engines at all, and most of them came back with gasolene in their tanks. However, this is exceptional, and for a race of 225 miles in length held in the Summer it is always more than likely that the use of the engines will play an important part in the outcome of the race.

Auxiliary owners have been talking for years, that they never had a chance to race and that nothing was ever done for them. They can't talk that way any more, for here is just what they have been looking for. The course is an ideal one and the race should attract at least a dozen entries. If less than that number shows up at the line, the owners of auxiliaries on the Sound may be open to the charge of being poor sports.

We Don't Agree with Elco

One of the side lights at the Motor Boat Show that brought a laugh to those who saw it, was a sign on the Elco cruisette. Having sold one of these fine little cruisers to Ed. Wynn, who, as everyone knows, is acting in "The Perfect Fool," the Elco Company announced the fact with a big placard on the bow of the boat which read, "Sold to Ed. Wynn, The Perfect Fool."

We predict, however, that "Ed." won't think he is that when he gets to using the cruisette.

Life's Darkest Moment—with apologies to Webster.

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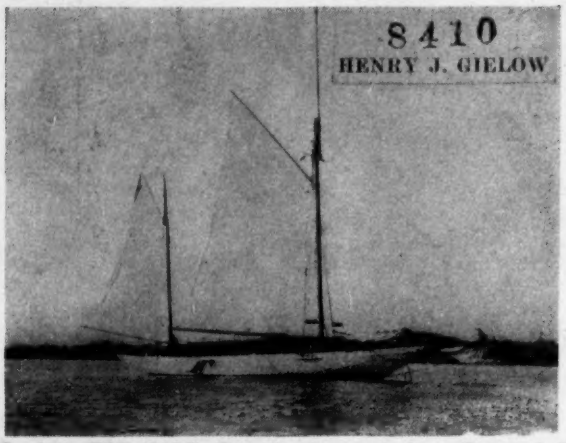
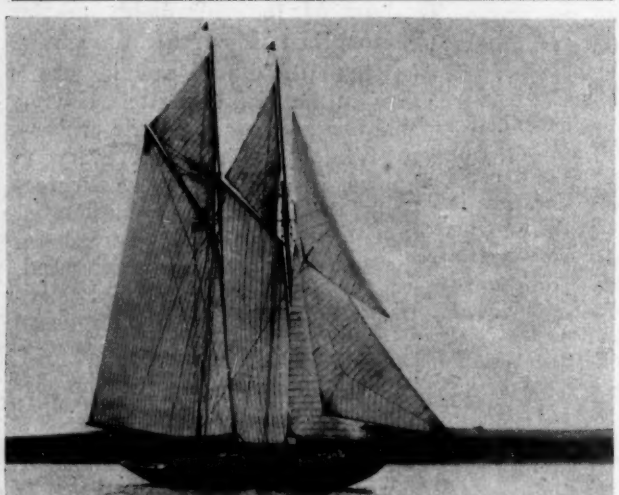
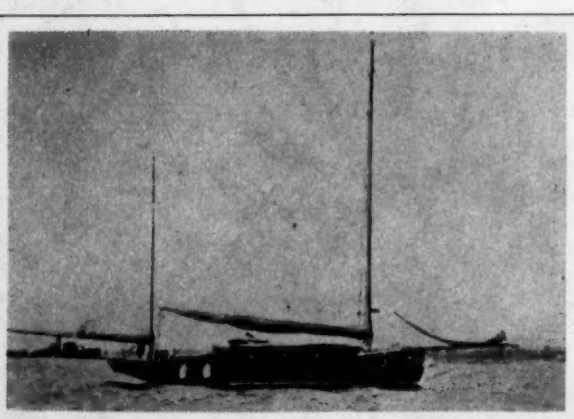


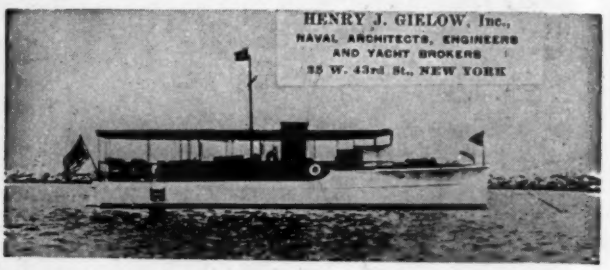
NO. 8410—FOR SALE—Exceptional opportunity. Recent built auxiliary sea-going ketch., 79 x 57 x 14'6" x 6'6". Keel and C. B.; remarkable vessel, heavy and strong, built at no sparing expense. Double and two single staterooms and saloon. 40 H. P. oil engine. Speed 8 knots. Sails new 1920. Very complete. Fast and able, suitable West Indies cruise. Good galley and forecastle. All deck trim teak. Henry J. Gielow, Inc., 25 W. 43rd Street, New York City.



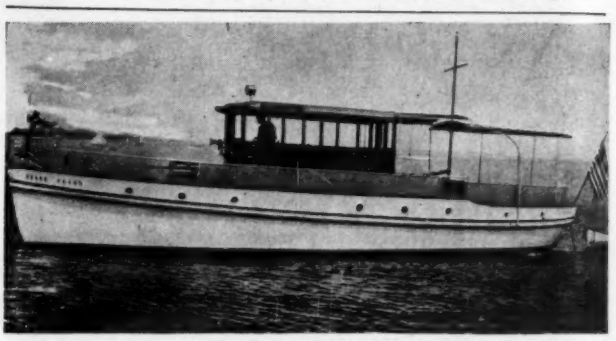
NO. 8649—At a reasonable price, this handsome 74' x 15' x 10'6" Lawley built Auxiliary Schooner. One double stateroom, large main saloon. Sleeps 4-6. Sterling motor. Best possible construction, always kept up. Two suits of sails. One suit used one season; all excellent condition. Henry J. Gielow, Inc., 25 West 43rd St., New York City.



NO. 8522—This fast and able 37' keel and centreboard Auxiliary yawl. Double stateroom. Main saloon and toilet room; galley. Sleeps 6. New Red Wing Motor 1920. New suit sails 1921. All first class condition. Price attractive. Henry J. Gielow, Inc., 25 West 43rd Street, New York City.

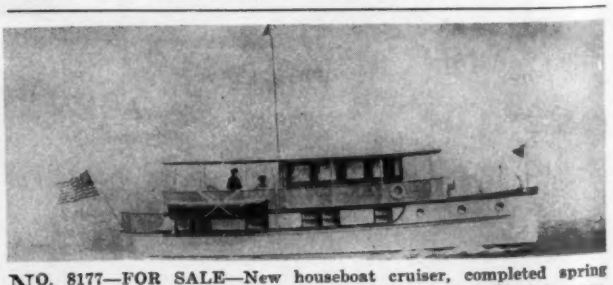


NO. 7644—FOR SALE—Rensonable price. High grade 52 ft. Bridge deck cruiser. Speedway motor, speed up to 15 miles. Double stateroom, saloon with upper and lower berths, toilet room and galley. Henry J. Gielow, Inc., 25 W. 43rd Street, New York City.



NO. 7634—FOR SALE—Exceptional offering in Lawley designed and built cruiser, 43' x 9'4" x 3'6". Double stateroom and saloon sleep 8. Steers and controls from deck saloon. 4 cylinder heavy duty Sterling Motor. Speed 12-13 miles. Separate electric light generator. Built best materials, regardless expense and all perfect condition. Fully equipped, including tender. Able sea boat; price reasonable. Henry J. Gielow, Inc., 25 West 43rd St., New York City.

NO. 8077—FOR SALE—Desirable cruising houseboat, all in fine condition. Thoroughly overhauled 1921. Inspectable New York. 75' x 16' x 3'6". Winton motor, 6 cylinder, 70 H. P. Three large staterooms, large deck saloon; newly furnished, screened throughout. Heavily built, able sea boat. Speed 10-11 miles. Price attractive. Henry J. Gielow, Inc., 25 West 43rd Street, New York City.



NO. 8177—FOR SALE—New houseboat cruiser, completed spring delivery. 48' x 13'6" x 3'. One double, one single staterooms, large saloon with two berths and deck saloon 12' x 8', sleeps six. Crew stateroom forward. Heavy construction, finished mahogany and cream enamel. Delco lighting plant. 40-50 H. P. 20th Century engine. All best workmanship. Speed 9-10 miles. Popular type for Florida and Northern cruising. Price reasonable, based on present reduced building cost. Henry J. Gielow, Inc., 25 West 43rd Street, New York City.

Buying a Boat

(*Continued from page* 131)

sible to take an engine apart for inspection, so that in this case also it becomes necessary to look for certain indications as to its performance and the care given it in use. Take a good look at the junk locker—you will find one on every boat—and let its contents guide you to some extent. The presence of a large number of discarded spark plugs, piston rings and other gadgets may usually be taken as evidence that life was not one long, sweet song so far as the engine was concerned. Examine the bed logs and the engine base lag screws for splits and looseness. A worn nut on the stuffing box gland points to undue attention being called for here. The exhaust piping should be so arranged that it will not siphon water back into the cylinders. Coils and batteries should have been removed to a dry place for storage. Fuel tanks and piping should be looked over and the outboard connections of the cooling system are worthy of attention. All these and other points will occur to the inspector in each individual case, so no more need be mentioned at this time.

Let us say that one or more satisfactory craft have been found, and that the owners have set their respective prices on them. In our survey we have determined approximately the work necessary in each case to put them in commission, some of which will doubtless be done by the intending purchaser. Nevertheless there will inevitably be some expense involved, which is properly chargeable to the initial cost of the boat, and should therefore be added to the purchase price. Before closing the deal it is well to consider whether the cost involved would be such as to make a new and specially designed and built boat worthy of consideration. In the latter case the element of time necessary for construction must be taken account of. Again, is there not possibly a standardized stock boat to be had of a type and size suiting the purchaser's requirements as well as the second hand boats he is considering? One consideration should be balanced against the other, and when the whole matter has been carefully weighed, an intelligent decision may be arrived at.

As a matter of fact, however, it is almost invariably necessary to base one's judgment on externals, with results that should be satisfactory if one knows how to judge properly.

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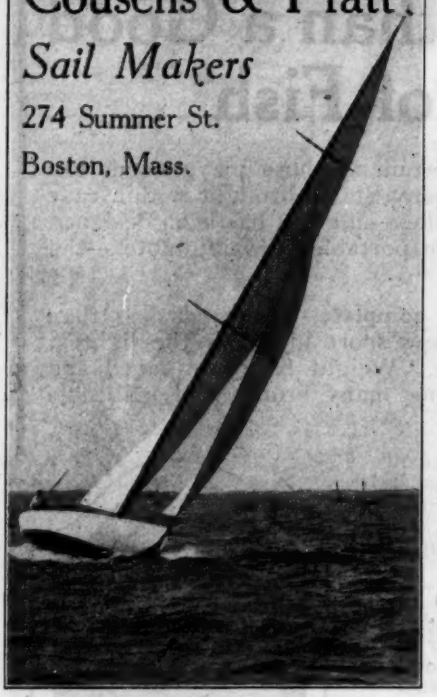

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To Nova Scotia and Back

(*Continued from page* 128)

cruising will soften up many a modern boat; but give her a week at a quiet mooring and she is often as sound as ever.

The only signs *Zing* showed of her pounding were faint cracks in the many coats of paint forward along a few of her formerly invisible seams. Still, it might have been cruel to her to drive her out again in that wind and sea. So we tacked to the head of the harbor and inside the breakwater with staysail alone, and went for a horseback ride ashore, the mere mention of which still creates chortling glee.

We had stayed in port to spare the *Zing*. When is caution dangerous? Had it not been for the watchful kindness of neighbors on the schooner *Surprise* and the cat boat *Victory* we might have found *Zing* mussed up on the jetty when we returned from our ride. Her cable had been left too short; she had dragged, but fortunately by fouling another boat was delayed in her career toward the rough stones long enough to be rescued.

Tuesday morning, and away again not to stop till the eye splice of the home mooring surrounded *Zing's* samson post. Not to stop? There was some very light weather—so light Tuesday night that we could not get off the steamer track and the whole procession of a dozen passenger boats had to swerve for us. They did not seem to see our running lights, but a wave of a white light would make them veer at once. An electric flash light to show off the sail would have been handy that night.

The last night, July 21-22, in Long Island Sound, there was a neat little breeze—sou'west, of course. Every now and then *Zing* would be put in irons. When the first man did it relations were somewhat strained; when the last man did it he could fairly feel the satisfaction exuding from the cabin. Alone on deck with a lively wind and double headsail sheets and back stays to manage, there is time for a wide play of emotions before you return from irons to your course and speed.

We reached Port Washington at 4 P. M., July 22nd, everything dry and sweet below, scrubbed, manicured and ready to start on another cruise if there were only another vacation. A table, compiled by the navigator, showed us that we had been under way for 258 hours and 35 minutes in the 18 days of the cruise. We had covered 1,067

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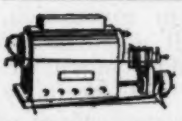

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nautical miles on the shortest distance from port to port and had made an average speed of 4.13 knots, "on our course," and much better than that in total distance sailed.

Designers and builders of honest boats are a blessing to mankind. May the makers of *Zingara* live long, prosper, and when their turns come, enjoy the great adventure as we enjoyed the little one they made possible for us.

Building Sea Chest

(*Continued from page* 140)

While the sheer strake is of course part of the planking it is also the finishing touch of the framing holding everything secure so we may as well put it on before we rest. Yellow pine is as good as anything for this plank, but we need something thin for a pattern, anything about ⅜ in. or ½ in. thick, six to eight inches wide and about twelve feet long.

Remove the batten next to the top and clamp the pattern plank in place so that it covers the sheer marks on stem and moulds. Do not try to spring it sideways, but let it take a natural position. Cut the end roughly to fit in the rabbet, transfer the sheer line marks to the plank, take it off and run a batten through the marks, drawing in a fair line. Trim the plank to the line and clamp it back on the boat, then get off and look at it. If it passes through the sheer marks and looks fair it is all right, if not don't hesitate to correct it or try again. This is the one line of the boat that is always prominent and on it much of her appearance depends.

If it is correct, use it as a pattern and trim the upper edge of the final plank to suit. Then shape the lower edge of the plank. It should be about five inches wide for four or five feet amidship, gradually tapering to four inches at the stem and to nearly three at the transom. Be sure the edges are square and clamp it into place. Fasten it to the stem with five screws and with three more to each frame. In order not to split the wood each screw must have a hole drilled for it and the head should be countersunk so that it sets well below the surface of the wood.

Cut the plank off square midway between the two frames just aft of station five and proceed to pattern, fit and fasten the after section. Where the two sections come together they are to be joined by what is called a butt block. This is preferably a piece of oak the

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same width as the plank, ¾ in. thick and long enough to fit closely between the two frames. The end of each plank is screwed to the block with at least five 1¼ in. screws.

The same pattern should do for both sides of the boat but it should be tried on the other side and corrected if necessary. The planks, of course, should be as nearly alike as possible.

We can now begin to see what the boat is going to look like and of course more photographs are in order. While you are taking them and resting from your labors, let's look into the question of a knock-down frame and see if we would have saved anything by getting one.

We would not have had to make any patterns as everything would already have been cut. Much of the keel would have been bolted together, and the rabbet cut. We should, however, have had to make the pattern for the iron keel. We would not have had to make the moulds as the frames already are bent to shape, have their floors fastened to them and are marked at the sheer line. They require only fastening in place and the use of a few battens to hold them while the sheer plank is being fastened on. The sheer plank is shaped, and has been fitted and probably already bored for at least one fastening to each frame. The whole job of setting up could probably be done in a couple of days.

(To be continued.)

The Largest Diesel Yacht

(Continued from page 141)

pronounced flare forward associated with a slightly curved stem and a short after overhang with the conventional steamer type of stern. She is of steel construction throughout, with high bulwarks and on the main deck there is a continuous steel deck house containing the main living rooms, the top of this house being run out to the full beam of the vessel, forming a large awning deck.

The entrance to the owner's quarters is on the starboard side on the main deck abreast the companionway and just abaft amidships, the doors leading into a vestibule from which access is had either to the owner's living quarters direct or to the guests' quarters through a separate stairway. There is an inside passage on the starboard side of

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the deck house which with the arrangement of stairways makes it possible to go from the staterooms below to any part of the vessel without going on deck, a very useful feature at night or in bad weather.

In the main deck house, commencing aft, are a lounging space closed in on three sides, the main living room, 28 feet in length and the full width of the deck house and having large windows on both sides and a fireplace at the forward end, the owner's private room and offices from which a private stairway leads directly to his living quarters on the main deck below, the main dining room which is the full width of the deck house and is 19 feet in length, and a breakfast room on the port side which is a most attractive apartment and may be used when only a few guests are on board. Between the entrances to the breakfast room and dining room are two stairways, one leading to the smoking room on the upper deck and the other to the guests' quarters below forward of the machinery space.

The quarters for the guests are all on the lower deck. In the after part of the vessel there are in addition to the owner's quarters, maid's room and trunk room, four unusually large staterooms arranged *en suite* with communicating bathrooms, large wardrobes and comfortable furniture. Forward of the engine space are two additional guests' staterooms with a communicating bath. The owner's stateroom and bathroom are also on the after lower deck forward of the space occupied by the guests' staterooms.

On the boat deck is a teak deck house containing the navigating room or pilot house with a wing bridge extending to the sides of the vessel and a smoking room. Abaft the funnel is a small teak deck house containing the radio apparatus and quarters for radio operator.

The boats are all stowed in chocks on the awning deck and consist of a 26 foot owner's launch, a 25 foot crew's launch, two 18 foot lifeboats and a 15 foot dinghy.

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